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ABSTRACT

This report compared educational trends in economically developed countries over time. The countries examined are members of the Organization for Economic Co-operation and Development (OECD), an organization of 29 countries dedicated to promoting economic growth and development around the world. In the United States, the 11 years included in this report were marked by increasing awareness of a range of critical issues in education, such as equal access to quality education, violence and drug use in schools, the increasing cost of higher education, the quality of teachers and teacher training, the implementation of technology in the schools, and the relationship between technological changes in the labor market and school curriculum. The indicators in this report permit the assessment of how well the United States has met some of the educational challenges of the past decade and permit the comparison of developments in the United States with those in other developed countries. The 18 indicators presented are divided into 5 sections: (1) demographic and socioeconomic context of education; (2) participation in education; (3) financial and human resources; (4) system outcomes; and (5) labor market outcomes. In the period from 1985 through 1995, there were increases in the rates of enrollment in secondary and higher education in virtually every OECD country. Public direct expenditures on education as a percentage of Gross Domestic Product remained fairly stable across OECD members, and first university degree graduation ratios increased in most OECD countries. Overall, the educational attainment of adults increased in most OECD countries, with the United States having a greater percentage of adults with at least a university education than any other G-7 country. (Contains 18 figures and 64 tables.) (SLD)

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International Education Indicators

A Time Series Perspective, 1985–1995

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International Education Indicators

A Time Series Perspective, 1985–1995

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EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

The period 1985–1995 witnessed increases in the rates of enrollment in secondary and higher education in virtually every Organization for Economic Co-operation and Development (OECD) country. Among "Group of Seven" (G-7) countries, the United States had the fourth highest enrollment rate of 14- to 17-year-olds at the lower and upper secondary level, and the second highest enrollment rate of 18- to 29-year-olds in higher education in 1995.

An increasing percentage of students in many countries received their primary and secondary education from private schools between 1985 and 1995, although this was not the case in the United States. There was also a slight decrease in the percentage of students enrolled in private higher education during this period.

Public direct expenditures on education as a percentage of Gross Domestic Product (GDP) remained fairly stable across OECD countries between 1985 and 1994. In the United States, expenditures as a percentage of GDP rose slightly at the primary level, remained stable at the secondary level, and declined slightly at the higher education level.

First university degree graduation ratios increased in most OECD countries between 1985 and 1995. In 1995, the United States had the lowest high school graduation ratio of any G-7 country, but the highest first university degree graduation ratio. Furthermore, the gender gap in first university degree graduation ratios reversed between 1985 and 1995, so that by the middle of the 1990s, graduation ratios for women surpassed those of men in most OECD countries.

The percentage of first university degrees awarded in science increased or remained stable in the majority of OECD countries reporting data between 1985 and 1995. The most notable exception to this trend was the United States, where the percentage of science degrees dropped by 5 percentage points, placing it last among G-7 nations, but only slightly lower than Canada.

Reflecting the overall trends in enrollments and graduation ratios, the educational attainment of adults aged 25-64 increased in most OECD countries. In 1995, the United States continued to have a greater percentage of adults with at least a university education than any other G-7 country.

In 1995, university graduates in the United States had a 74 percent earnings advantage over high school graduates, one of the highest earnings advantages reported by OECD countries.

INTRODUCTION

INTRODUCTION

International Education Indicators: A Time Series Perspective, 1985–1995 compares educational trends in economically developed countries over time. The countries examined in this report are members of the Organization for Economic Co-operation and Development (OECD), an organization of 29 countries dedicated to promoting economic growth and development around the world. This report extends the earlier National Center for Education Statistics (NCES) publication *International Education Indicators: A Time Series Perspective*[1] from a seven- to an 11-year time series to provide a more comprehensive picture of continuity and change in countries' education systems.

The eleven years included in this report were a period of rapid social, political, and economic changes for many OECD countries. During this period the OECD expanded its membership to include Mexico in 1994, and the Czech Republic in 1995.* In the United States, the eleven years were a period marked by increasing awareness of a range of critical issues in education. These issues included equal access to quality education, violence and drug use in the schools, the increasing cost of higher education, the quality of teachers and teacher training, the implementation of technology in schools, and the relationship between technological changes in the labor market and school curriculum. The years 1985-1995 also saw renewed interest in the issues of educational standards and finance reform.

The indicators included in this report permit us to assess how well the United States has met some of the educational challenges of the past decade, and to compare developments here with those in other developed countries. These indicators also should aid policy makers in determining what changes, relative to other countries, have been made in the education system in the United States during this period of intense reform.

By comparing changes in the United States during this time period to changes occurring in other countries that were also engaged in their own reform movements, this report allows countries to identify similarities and differences among themselves, and to compare trends in their own country to those occurring in other countries. Comparing trends over time across countries can help policy makers from various countries to identify successful strategies for improving the delivery and outcome of education services.

Highlighted in this publication are the basic components of countries' education systems—enrollments, expenditures, educational outcomes, and labor market outcomes. These components are set within countries' demographic and socioeconomic contexts. Readers are thus able to review both substantive education indicators and their larger context. The context includes an understanding of the education systems and social structures of different countries, factors which have a bearing on a country's relative position on a given education indicator. Provided with such background, the reader can better understand, and make inferences about the meaning of the

*Three additional countries, Hungary, Poland, and South Korea joined the OECD in 1996. Because these countries reported data retrospectively for the period under study, they are included in this report.

indicators for each country, its students, and its people. Moreover, by comparing trends in demographic and socioeconomic variables to trends in the education system, the reader can more clearly see the relationship between background variables and education policies.

Data sources and limitations

The data for this publication come primarily from one data source: the 1996 Education Database published on-line by OECD (http://www.oecd.org/els/stats/edu_db/edu_db.htm). In addition, when necessary, these data are supplemented with data from other OECD publications, as well as data from the U.S. Department of Commerce. Readers can locate the specific data sources used in each indicator at the bottom of the data tables. However, readers should keep in mind that these data have several limitations that deserve mention.

The data were originally collected for individual years by the OECD as part of the Indicators of Education Systems (INES) project, with no special consideration given to building a longitudinal trend series. The data were then revised in 1993, in order to build a coherent data series that could be used for longitudinal comparisons. These revised data are reported in this publication. Several problems occurred in the revision, however, which raise questions about the strict comparability of the data as a time series.

First, definitions of many variables collected through INES are refined each year to improve the comparability of indicators across countries (see notes to tables 8-1 to 8-4 for an example). Therefore, a definition used in 1991 may be different from the one used in 1985. In addition, methods of collecting data, and the forms used to report data to OECD, also have changed over the years, again raising questions of data comparability over time.

While these problems affect some indicators more than others, we believe that the indicators selected for this publication have minimal data problems. In cases where we observed comparability problems with the data for an indicator, we provided footnotes to explain the source of the problem. These explanations were obtained directly from country representatives who are familiar with the data, changes in their definition, and data collection methods over time.

In a few cases where data trends appeared inconsistent and no explanation could be provided by country representatives, we excluded the country's data from the tables. For this and other reasons, most indicators are missing data for one or more countries for one or more years. In such cases, cross-country averages were calculated by using only the countries that reported data for each year of the time series. For reasons of reliability, if fewer than five countries reported data for each year, no averages were reported. Thus, the averages may not be a representative measure of the overall OECD average for any given year.

The 1996 OECD on-line education database was also limited in the number of years for which it contained finance data. The last year of available finance data in the database was 1994. Consequently, the indicators included in the financial and human resources section of the report are limited to a 10-year time series spanning 1985-1994.

In the future, a new database will highlight the discrepancies for each country for each year. Efforts will then be made to have each country resolve the problems with its data. Newly revised

data will be integrated into the original INES database, which should allow for more reliable time series comparisons among the countries. Until then, the data contained in this report are the best available.

Objectives and organization of the report

This publication presents indicators that each give a broad picture of an education issue, allowing for comparisons to be made both among countries and over time. The indicators selected for this publication were chosen because of their policy relevance and available data. Issues were selected because of their relevance to many countries, and because they show changes occurring over time.

For the selection among the policy-relevant indicators, the final indicators were chosen for inclusion in this publication if they provided data for a majority of the OECD countries over most of the years, and if the data were deemed *not* to contain severe comparability problems. The report includes 18 indicators encompassing a wide range of education issues that provide a comprehensive view of the differences among countries and the changes over time.

The 18 indicators presented are divided into five sections:

- **Demographic and socioeconomic context of education**
- **Participation in education**
- **Financial and human resources**
- **System outcomes**
- **Labor market outcomes**

The **Demographic and socioeconomic context of education** provides some background information to understand the context within which the education system operates. **Participation in education** examines enrollment rates across the countries at the various education levels, and shows where and how enrollment rates have fluctuated over time. **Financial and human resources** provides information on the relative expenditures for education, and on the percentage of resources each country has been willing or able to contribute to its education system over time. **System outcomes** reports the percentage of the population that is awarded degrees and the proportion of those degrees that are in science, providing an indication of the skill level of the various countries in some specific areas of study. Finally, **Labor market outcomes** looks at the relationship between education and labor force participation, unemployment, and earnings in each of the countries, over time. Because economic returns in the labor market are a major goal of investment in education in all countries, this section indicates each country's success relative to that goal.

Within any given section, each indicator contains findings summarized in textual, graphical, and tabular formats. Major points are summarized on one page in a series of bullets, prefaced by an explanation of the policy relevance of the indicator. With few exceptions, the text is followed by three graphics highlighting key trends in six OECD countries, and four tables of time-series data. Countries displayed in the graphics were selected to show the range of values on a particular indicator and highlight important changes discussed in the text. Because the focus of the graphics is to capture key findings on each table, countries included may differ across graphs within the same

indicator. Countries in all charts were rank-ordered from highest to lowest, based upon the most recent year of displayed data.

Several indicators include explanations of the technical points of the analysis, while discrepancies in the data or substantive differences among countries (e.g., different definitions of terms) are discussed in the supplemental notes and tables section. In addition, because some of the terms used may not be familiar to readers, we have included a glossary at the end of the report.

Following this introduction, the report is divided into two sections, an essay section, and an indicators section. The goal of the essay is to provide a broad comparison of 1985-1995 educational trends across OECD countries, with specific emphasis on how the United States compares with other countries, especially other "Group of Seven" (G-7) countries. The G-7 countries—Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States—are recognized as the world's major industrialized economies. These countries are fairly similar to one another in terms of economic development, and are major competitors in world commerce. The essay focuses on trends in the two broad education levels of interest to U.S. audiences: primary/secondary education, and higher education. The goal of the indicators section is to provide a general overview of the education systems in each of the 29 participating OECD countries plus Russia, from 1985 to 1995, and to make comparisons of key education policy issues both among countries and over time.

References

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ESSAY

INTERNATIONAL TRENDS IN EDUCATION, 1985-1995

The period 1985–1995 was one of rapid and important social and political changes in many countries, coupled with worldwide economic instability. These eleven years witnessed the collapse of the Soviet Union, the reunification of Germany, the break-up of Czechoslovakia and Yugoslavia, the creation of the European Union, and shifts in the political control of governments of large economies such as the United States, France, and Japan. These social and political changes often occurred within a context of shrinking economies, mounting unemployment, reduction in government-sponsored social programs, and demographic change.

This essay examines trends in education systems across OECD countries in the context of the social, political, and economic changes that took place in the period 1985–1995. Because the current publication is geared to the interests of a U.S. audience, the goal is to provide a broad comparison of educational trends, with specific emphasis on how the United States compares with other countries, especially with other "Group of Seven" (G-7) countries.

The essay contains four sections. The first section looks at the demographic and socioeconomic context of education in OECD countries. The next two sections discuss trends in primary/secondary education and trends in higher education respectively. At each of these two broad education levels we assess changes along the four dimensions addressed by the indicator section of this report: 1) participation in education, 2) financial and human resources, 3) outcomes of education systems, and 4) labor market outcomes. A final section summarizes overall education trends for the period 1985-1995 and provides concluding remarks.

The demographic and socioeconomic context of education in OECD countries

Contextual characteristics of OECD countries

Between 1985 and 1995, two new countries joined the OECD: Mexico in 1994, and the Czech Republic in 1995. A year later, an additional three countries, Hungary, Korea, and Poland, became OECD members. This brought the number of OECD countries to 29 in 1996. Overall, OECD countries vary greatly in size, population, population density, and reliance on different sectors of employment (Indicator 1). These differences are likely to affect the way countries meet various education demands and priorities. Countries like Canada, the United States, and Australia, spreading over several million square miles, face different challenges in the organization and delivery of education services than countries like Luxembourg, Belgium, the Netherlands, or Denmark, which are just a few thousand square miles. Similarly, countries with large populations (e.g., the United States, Japan, Mexico) must make different choices about the amount and location of education services than countries with small populations (e.g., Luxembourg, New Zealand). These important

differences must be kept in mind when assessing cross-country variation in enrollment, finance, and educational or labor market outcomes over time.

OECD countries tended to be more similar in terms of their reliance on various sectors of employment. In 1995, all but two OECD countries, Turkey and Poland, reported over half of all jobs in the service sector. In three countries, the Netherlands, the United States, and Canada, the service sector accounted for about three-fourths of all jobs. The United States and Canada had the highest proportion of service sector jobs among G-7 countries (73 percent), and Germany the lowest (59 percent). These differences in sectorial concentration of the labor force may be reflected in the emphasis countries place on different types of education programs. Countries highly dependent on the service sector (e.g., the United States) are likely to rely largely on academic programs, while those more dependent on the industrial sector (e.g., Germany) are likely to rely heavily on vocational or technical programs.

Demographic trends

Between 1985 and 1995, OECD countries faced a common demographic trend: the aging of their populations. Every year, as the proportion of older individuals increased, that of the youth population steadily shrank. In virtually every OECD country reporting data, the percentage of the population aged 5 to 24 decreased between 1985 and 1995 (Indicator 2). The 14 to 17 age group declined an average of 1 percentage point across all OECD countries reporting data. The percentage of the population in the 18 to 24 age group also witnessed a marked decrease in the majority of OECD countries. Although there was a general pattern of decline among the 5 to 13 age group among OECD countries, the United States registered a slight increase.

Overall, the largest declines in the percentage of school-age youth population (i.e., those aged 5 to 24) occurred in Italy and the Netherlands. In contrast, the smallest declines took place in Sweden and Greece. Among G-7 countries, the United States witnessed the lowest decline in its youth population.

A reduction in the percentage of the youth population could potentially lead to more or better education services, since a smaller proportion of students is competing for these services. This, of course, assumes that education spending remains constant or even increases. However, since a decrease in the student-age population is usually accompanied by a parallel increase in the older population, countries must decide on what segment of their population they wish to invest their limited resources. Unless they raise more revenues (for example, through increased taxation), countries with an aging population will have to decide whether they wish to give higher priority to education programs or social programs for their senior citizens. The choices countries make will have implications not only for education finance, but for the education and labor market outcomes of their citizens. Therefore, there is an important relationship between demographic trends and the delivery and outcome of education services.

Economic trends

The period spanning the years 1985–1995 was one of rapid economic change and instability for many OECD countries. By 1985 most OECD countries had largely recovered from the recessions of the 1970s. Yet, political turmoil in the East, an accelerated shift from the

manufacturing to the service sector, trade imbalances, national budget deficits, high unemployment, and high inflation often combined to make for a less than ideal economic climate. In an effort to curb high inflation and contain spending, many OECD governments adopted austere fiscal policies. These strategies were often at the expense of social programs such as education, health, and welfare. Economic prospects in many OECD countries deteriorated between the middle of the 1980s and the early 1990s. However, several studies suggest that by the middle of the 1990s some of the policies adopted by OECD governments to stabilize their economies started to pay off, and several countries' economies were on the rebound (e.g., the United States, Germany, Denmark, Sweden).[1,2]

Between 1985 and 1995, GDP per capita increased at a modest rate in the majority of OECD countries, with the exception of New Zealand, Sweden, and Australia, where it decreased (Indicator 3). GDP per capita increased most in the smaller economies of Ireland and Luxembourg, as well as in the developing economies of Portugal and Turkey. Among G-7 countries, GDP per capita increased most in Japan and Italy, and least in Canada and Germany. In the United States, GDP per capita increased by 11 percent between 1985 and 1995, or equivalent to the average increase in G-7 countries.

Between 1985 and 1995, the unemployment rate went up in the majority of OECD countries (Indicator 3). In some countries, most notably Iceland, Finland, and Sweden, unemployment more than doubled in this time period as a result of severe recessions spurred by trade imbalances.[3] In many countries, unemployment peaked in the early 1990s, then dropped slightly by the middle of the decade. In many Western European countries, the unemployment rate consistently remained in the double digits (e.g., Spain, France, Belgium, Ireland, Italy). Among G-7 countries, Japan and the United States had the lowest unemployment rates, although Japan's rate increased between 1985 and 1995 while that of the United States decreased.

The trends in youth unemployment (i.e., those under 25) tended to mirror those of the overall unemployment indicator between 1985 and 1995, with the only difference being in the higher order of magnitude (Indicator 3). In both Spain and Italy, youth unemployment was consistently above 30 percent. In contrast, youth unemployment remained under 10 percent in Germany, Japan, Korea, Luxembourg, Mexico, and Switzerland. Among G-7 countries, Japan consistently had the lowest rate of youth unemployment, followed by Germany and the United States.

Trends at the primary and secondary levels

Enrollment

The period 1985–1995 witnessed increases in the rates of 5- to 13-year-olds enrolled at the primary and lower secondary levels and 14- to 17-year-olds enrolled at the lower and upper secondary levels in most OECD countries reporting data (Indicator 4). Lower and upper secondary enrollment rates of 14- to 17-year-olds in particular showed large increases in many countries, including Portugal, Turkey, Spain, and the United Kingdom. Overall, participation in lower and upper secondary education of 14- to 17-year-olds increased by an average of 7 percentage points across OECD countries in this eleven-year period. Participation rates at the primary and lower secondary level for 5- to 13-year-olds increased at a more modest pace, averaging 2 percentage points. Of course, most of the OECD countries have nearly universal school attendance at the younger ages, leaving little room for additional growth. Growth in enrollment rates should be seen

as a positive trend, since enrollment rates are often used as a barometer of the equitable stock of knowledge available in a given country. Across the board, countries put significant effort into increasing the educational level of their youth.

Yet, as of 1995 there remained important differences in enrollment rates at the primary and secondary levels among various OECD countries. These differences tended to reflect the level of economic development of the various countries. G-7 countries tended to have the highest rates of enrollment at the primary and lower secondary levels for 5- to 13-year-olds (above 90 percent), along with other economically advanced nations such as the Netherlands, Australia, Belgium, and Austria. Then followed Northern European countries (e.g., Denmark, Finland, Iceland, Norway, Sweden) with rates of between 80 and 90 percent. Finally came the least developed of the OECD economies such as Greece and Turkey, with primary and lower secondary enrollment rates of 5- to 13-year-olds below 80 percent. This pattern was similar although less pronounced in the enrollment rates of 14- to 17-year-olds at the lower and upper secondary levels, with large differences existing only between developing (Turkey, Mexico, Greece, Poland, and to a lesser extent Portugal) and developed economies. Among G-7 countries, the United States had among the highest enrollment rates of 5- to 13-year-olds at the primary and lower secondary levels but was about average in terms of its enrollment rate of 14- to 17-year-olds at the lower and upper secondary levels.

Enrollment rates in upper secondary institutions (equivalent to high school in the United States) for ages 16 through 19, ages that typically fall beyond those of compulsory education, tended to increase in the majority of OECD countries between 1985 and 1995, reflecting a combination of increased demand for further education as well as increased educational opportunities (Indicator 6). Several countries in particular, Portugal, Spain, Sweden, and the Netherlands, showed marked increases in upper secondary enrollment rates at all age levels. In the United States, enrollment rates of 16- and 17-year-olds at the upper secondary level decreased slightly while those of 18- and 19-year-olds increased slightly.

Between 1985 and 1995, the percentage of primary school students enrolled in private institutions increased in the majority of OECD countries reporting data on private school enrollment (Indicator 5). The secondary level also experienced a modest increase in many countries. In two countries, the Netherlands and Belgium, a majority of primary and secondary students attended private schools. In Spain and Australia, primary and secondary private schools enrolled about a third and a fourth of all students, respectively. Denmark and the United States had between 10 and 15 percent of primary and secondary students enrolled in private schools. In the remaining OECD countries, private education was but a minor part of the primary and secondary education system. Among G-7 countries, the United States was behind France in its primary private school enrollment, and behind France and Japan in its secondary private school enrollment. In contrast with most OECD (and G-7) countries, private school enrollments at the primary and secondary levels decreased slightly in the United States between 1985 and 1995.

Financial and human resources

The trends in financial and human resources for education for the period 1985–1994 reflect a mixed picture, not unlike overall economic trends in OECD countries. Confronted with economic difficulties and demographic changes, governments had to make choices regarding the allocation of national, regional, and local revenues. Some continued to maintain their financial commitment to

education, while others chose different priorities. Overall, trends in education finance reflect some of these choices, showing a mix of decreases, stability, and increases in financial and human resources for primary and secondary education.

Public direct expenditures on primary and secondary education as a percentage of GDP reflect the mix of government decisions on education spending (Indicator 8). While expenditures as a percentage of GDP remained stable overall across most OECD countries, they increased in some countries and decreased in others. At the primary level, public direct expenditures as a percentage of GDP decreased most in the Netherlands and Denmark. In contrast, public direct primary expenditures as a percentage of GDP increased in the United Kingdom, Germany, the United States, and Belgium. At the secondary level, expenditures as a percentage of GDP across most OECD countries also remained fairly stable, despite individual fluctuations, again most notably in the Netherlands. In the United States, public direct expenditures on secondary education as a percentage of GDP remained relatively steady between 1985 and 1994.

It is likely that some countries lowered their total direct expenditures on primary and secondary education as a percentage of GDP as a strategy aimed not at reducing average education spending, but rather at redistributing revenues across social programs. As we have seen above, the period 1985–1994 witnessed a reduction in the size of the school-age youth population in virtually all OECD countries. It is likely that some governments took this demographic shift into consideration when allocating public revenues. Also, in many OECD countries with extensive social welfare benefits, these shifts would occur without any government intervention. In general, OECD governments have tended to reduce total spending on education as a percentage of GDP without reducing average per student spending. A rapidly expanding economy can also contribute to this effect because GDP may be rising faster than the demand for additional education resources. These arguments are supported by the trends in direct public expenditures per student at the primary and secondary levels between 1985–1994 (Indicator 9).

In almost every OECD country with available data, direct public expenditures per student increased at both the primary and secondary levels between 1985 and 1994—this despite a slight decrease in expenditures as a percentage of GDP for this period in many of these countries. Among G-7 countries reporting data, the largest increase in public expenditures per student at both the primary and the secondary levels occurred in Italy. The United States experienced a moderate increase in its primary and secondary per-student expenditures of 16 and 19 percent respectively, at the same time experiencing a growing pool of 5- to 13-year-olds and only small decreases in its pool of 14- to 17-year-olds.

A consistent upward trend did not prevail in the area of teacher compensation (Indicator 10). An OECD average of the available data spanning the years 1992 through 1995 indicates that both starting and maximum teacher salaries at the primary and lower secondary levels remained stable, in real terms, although there were wide variations for individual countries. The largest decreases occurred in Italy, Finland, and Norway. In the United States, starting and maximum primary teacher salaries increased slightly while those for lower secondary teachers decreased or remained steady.

The number of primary teachers remained stable or decreased in most of the OECD countries reporting data between 1985 and 1994. In contrast, the number of secondary teachers increased slightly during these years in many countries (Indicator 11). The percentage of the total labor force

working as primary teachers decreased or remained constant in 11 of the 12 OECD countries reporting trend data. The picture is somewhat reversed at the secondary level, where 8 of the 12 OECD countries reporting data experienced increases in their percentage of the total labor force employed as secondary teachers. Data on teachers for G-7 countries is rather limited, yet it appears that only in the United Kingdom did teaching staff as a percentage of the total labor force systematically increase at both the primary and secondary levels between 1985 and 1994.

Trends in the ratio of students to teaching staff reflect a combination of trends in the supply of teachers and students at the primary and secondary levels (Indicator 12). The primary level presents a mixed picture, with a small increase in the student/teacher ratio in some of the 12 reporting OECD countries, but also large decreases in Spain, Italy, and Turkey. In contrast, an increasing number of teachers and a decreasing number of students combined to yield a decrease in the student/teacher ratio at the secondary level in most OECD countries reporting data between 1985 and 1994.

Education and labor market outcomes

The limited data available on high school graduation ratios indicate a mix of stability in some countries and improvement in others over the period 1985–1995 (Indicator 13). Rising graduation ratios typically signify overall skill increases in a country, and therefore heightened capacity for economic growth, productivity, and competitiveness. Of course, rising graduation ratios also could be the result of lower graduation standards. The most notable increases in high school graduation ratios occurred in countries experiencing rapid economic growth (e.g., Turkey, Spain, Portugal). Among G-7 countries, Italy, and to a lesser extent France, made significant progress in their high school graduation ratios between 1985 and 1995. Italy's high school graduation ratio went from 40 to 78 during this period and that for France went from 64 to 87. In contrast, the United States saw its high school graduation ratio decrease slightly in those years from 73 to 71. In 1995, the United States had the lowest high school graduation ratio of any G-7 nation reporting data.

Partly reflecting the trends in high school graduation ratios, there was also a marked improvement in the percentage of the adult population age 25–64 who attained at least a high school education between 1989 and 1995, the only years for which data are available (Indicator 16). This trend was evident in the vast majority of OECD countries, with the exception of Australia. The most notable improvements in upper secondary education attainment occurred in France, Belgium, and the United Kingdom as well as in the expanding economies of Portugal, Spain, and Ireland. The United States also witnessed an upward trend in its percentage of the adult population attaining at least a high school education, placing it first in upper secondary educational attainment of its citizens among OECD countries reporting data in 1995. The fact that the United States experienced a decrease in its high school graduation ratio while at the same time experiencing an increase in its percentage of adults with an upper secondary education likely reflects the increasing number of individuals obtaining high school equivalency degrees (e.g., GED) between 1985 and 1995,[4] and the long trend of relatively high high school completion rates.

As a result of global shifts in the economy, unemployment rates rose in the vast majority of OECD countries between 1989 and 1995 for individuals with an upper secondary education or less (Indicator 17). This, however, is not to say that higher levels of educational attainment do not matter. In most countries, the unemployment rate of individuals with a lower secondary education or

less tended to be substantially higher than those individuals with an upper secondary education. Unemployment for these two categories of individuals grew fastest in Sweden, Finland, and Spain, more than quadrupling for Finland and Sweden between 1989 and 1995. Despite the growth in unemployment in Switzerland, their rates remained among the lowest of all OECD countries. This trend underscores the increasing vulnerability of individuals with low skill levels in a rapidly changing and technologically oriented global economy. Among G-7 nations, the United States had the lowest rate of unemployment for those with only an upper secondary education.

The data regarding labor force participation, only available for 1995, mirrored that for the unemployment rate (Indicator 17). Individuals with an upper secondary education were much more likely to be in the labor market than their counterparts with only a lower secondary education or less. Across all OECD countries reporting data, the labor force participation rate of persons with an upper secondary education averaged 16 percentage points more than those with a lower secondary education or less.

The available data for the period 1990 to 1995 also document a positive relationship between educational attainment and earnings (Indicator 18). People with an upper secondary education earned more than people with only a lower secondary education or less in all OECD countries reporting data. The earnings gap between upper secondary graduates and those with a lower secondary education or less narrowed in some countries (e.g., Australia, Canada, New Zealand), while it increased (e.g., Switzerland, the United States) or remained stable (e.g., Denmark, Norway) in others. A similar picture emerges when comparing relative earnings of upper secondary graduates with those who attained a non-university higher education.

Data for the period 1990 to 1995 also indicate a narrowing of the earnings gap in four of the five OECD countries reporting data when comparing upper secondary graduates with persons with at least a university education. With the exception of the United States, the returns to university education when compared to only an upper secondary education seem to have eroded slightly in at least some countries.

Trends in higher education

Enrollment

Higher education includes both two-year programs offered at community colleges (non-university higher education) and bachelor's and graduate programs offered at 4-year colleges and universities (university education). Typically, admission to a higher education program requires the successful completion of an upper secondary education degree (e.g., a high school diploma or its equivalent in the United States).

Participation in higher education for people aged 18 to 24 increased in every OECD country reporting data between 1985 and 1995 (Indicator 4). This trend demonstrates that many countries are making progress in raising the overall skill level of their citizens. The average participation rate of 18- to 24-year-olds in higher education for all OECD countries moved from 13 in 1985 to 19 in 1995. While expanding economies may have fueled the demand for higher education in countries like Portugal and Spain, this was by no means the only reason for the large increases in higher education participation rates. In countries such as the Netherlands, Finland, Norway, Sweden, and

France, a slackening of the labor market combined with rapidly rising unemployment may have kept otherwise eligible job seekers in the higher education system. It is notable that in the United States, which experienced a drop in unemployment between 1985 and 1995, the increase in higher education participation by 18- to 24-year-olds was the smallest of any OECD country reporting data—although throughout the period the United States had one of the highest rates of enrollment in higher education.

Despite the overall upward trend in participation in higher education, in 1995 there remained large cross-country differences in the percentage of 18- to 24-year-olds enrolled in higher education institutions. The developing economies of Mexico, Turkey, and Hungary continued to send a far smaller proportion of students on to higher education than the more economically advanced OECD countries. Even among G-7 countries, there were some important differences. The participation rate of 18- to 24-year-olds in higher education in Canada and the United States was more than twice that of Germany. This difference partly reflects greater openness of the North American education systems, as well as Germany's greater dependence upon the industrial sector and thus greater reliance upon its expansive vocational education system.

While enrollment rates in higher education increased across all age groups in virtually every OECD country between 1985 and 1995, many of the largest gains occurred among 18- to 21-year-olds (Indicator 7), with countries such as Portugal and Norway doubling their enrollment rates. Among G-7 countries, Canada, France, and the United States enrolled about one third of their 18- to 21-year-olds in higher education institutions. Large gains in higher education enrollment were also registered among 22- to 25-year-olds and 26- to 29-year-olds, especially in Portugal, Finland, Norway, and Belgium. The overall increase in higher education enrollment among 26- to 29-year-olds suggests that countries are becoming more flexible in the delivery of advanced education, encouraging older students to return to school to improve their skills. But it also suggests that older individuals are realizing the importance of investing in higher levels of education for success in the labor market. Among G-7 countries, Germany and the United States had more than 10 percent of 26- to 29-year-olds enrolled in a higher education program.

There was an overall decrease in the percentage of students enrolled in private higher education institutions among the 11 countries reporting data between 1985 and 1995 (Indicator 5). In Japan, Belgium, and the Netherlands, the delivery of higher education services continued to be primarily the responsibility of private institutions, although in Japan and Belgium enrollment in private institutions decreased slightly. The United States' private institutions enrolled less than a fourth of all higher education students between 1985 and 1995, and the percentage of private higher education enrollment decreased slightly during these years. Except for France and Japan, which enrolled about 12 and 80 percent of students, respectively, in private institutions, the remaining G-7 countries had a negligible percentage of students enrolled in private higher education institutions.

Financial and human resources

Much more than primary and secondary education, higher education was affected by the ups and downs of the economy between 1985 and 1994. Economic difficulties often led governments to make cuts in higher education spending as a way to keep budget deficits under control or force other social spending to accelerate at a rapid rate. Unfortunately, economic difficulties also often led to increasing demands for higher education services as would-be job seekers decided to remain in

school in order to shield themselves from an inhospitable labor market. This combination of events made for a less than ideal decade for higher education finance in many OECD countries.

The amount of public direct expenditures on higher education as a percentage of GDP dropped or remained constant in the majority of reporting OECD countries (Indicator 8). There were, of course, exceptions, most notably in countries such as Norway and Spain, which saw a surge in higher education enrollment. These countries increased education spending in light of the increasing burden put on the higher education system. In most of the remaining countries, however, public direct expenditures as a percentage of GDP decreased. Among G-7 countries reporting data, Canada experienced the largest decrease. The United States also experienced a decrease in public direct expenditures on higher education as a percentage of GDP. Only Italy—the G-7 country that spent the least as a percentage of GDP on higher education throughout the decade—increased its higher education spending.

The picture of higher education finance remains basically unchanged when looking at direct public expenditures per student (Indicator 9). Overall, decreasing higher education funding as a percentage of GDP combined with overall increasing higher education enrollment led to declining per student direct public expenditures in higher education for almost every OECD country between 1985 and 1994. Again, two notable exceptions are Spain and Norway. Direct public expenditures per student in higher education decreased in every G-7 country reporting data, led by a 58 percent decrease in the United Kingdom. Germany and the United States had relatively small decreases of 4 and 6 percent respectively. In 1994, among G-7 countries, Canada and the United States had the highest level of direct public expenditures per student in higher education.

Although the trend data on higher education teaching staff are limited, the little that is available suggests a pattern consistent with other indicators of education finance in higher education (Indicator 11). Between 1985 and 1992, the last year for which data are available, higher education teaching staff as a percentage of the total labor force declined or remained constant in most OECD countries reporting data. The largest declines occurred in Italy and the Netherlands. Consistent with other indicators of financial and human resources in higher education, Spain increased its percentage of the total labor force employed as higher education teachers. In 1992, among G-7 countries, Italy had the lowest percentage of its labor force employed as higher education teachers (0.1 percent), and the United States the highest (0.5 percent).

Trends in the ratio of students to teaching staff in higher education capture the overall trends in higher education enrollment, expenditures, and teacher counts (Indicator 12). Namely, there is some evidence that the number of teachers did not generally maintain pace with increases in enrollments in many countries. Despite the general upward trend in student/teacher ratios in higher education, there remained some substantial variation in this ratio even among G-7 countries. In 1992, the ratio of students to teaching staff in higher education ranged from a low of 12 in Japan, to 16 in the United States, to a high of 29 in Denmark. This variation is likely to result in a range of the scope of higher education services delivered to students across countries.

Education and labor market outcomes

Between 1985 and 1995, first university degree graduation ratios increased in all the reporting OECD countries with the exception of Sweden (Indicator 14). In the United States, the

graduation ratio is the number of bachelor's degree recipients divided by the number of 22-year-olds. In other countries, the graduation ratio is computed similarly as the number of first university degree recipients divided by the number of people at typical age of graduation (see Table S-3). This positive trend is likely the result of increasing higher education enrollments. The link between enrollment and graduation is made clear in countries such as Denmark, the Netherlands, Spain, and Portugal. In all of these countries, large increases in higher education enrollments also led to large increases in first university graduation ratios. The United States, which only experienced a modest increase in higher education enrollment between 1985 and 1995, nevertheless was able to increase substantially its first university degree graduation ratio. Among G-7 countries, the United States consistently maintained the highest first university degree graduation ratio, but only slightly higher than Canada.

There was also a marked change in the gap in first university degree graduation ratios between men and women during the years 1985-1995. In 1985, first university degree graduation ratios were higher for men than for women in the majority of OECD countries. This trend had reversed by 1995. In fact, only in six countries–Austria, Germany, Japan, Korea, Switzerland, and Turkey–did graduation ratios for men continue to surpass these for women in 1995, suggesting differences in the choices men and women make in these countries. Overall, the trend of women reaching parity with men in access to and graduation from higher education reflects broader societal changes, especially in terms of greater opportunities for women in the workplace. Among G-7 countries, the United States had the highest first university degree graduation ratio for women, and the third highest for men. Italy had the lowest for both men and women.

The percentage of first university degrees awarded in science, an indicator of technological emphasis in a given country, showed a variety of patterns among OECD countries between 1985 and 1995 (Indicator 15). In some cases, these trends reflected the increased demands of the labor market for highly specialized, technical knowledge. The most notable decrease in the proportion of science degrees occurred in the United States, where the science proportion dropped by 5 percentage points between 1985 and 1995. This decline placed the United States last among G-7 countries in the percentage of first university degrees awarded in science, and next to last after Portugal among all reporting OECD countries. In contrast, Germany increased its percentage of first university degrees awarded in science by 8 percentage points to a total of 32 percent, placing it first among G-7 countries, with almost double the percentage awarded in the United States.

However, the increase in first university science degrees was not equal across all science subfields. Most countries—with the exception of Norway, the United States and Canada—experienced gains in math and computer science. In the latter two countries, the decline in math and computer science degrees might be due to an oversupply of computer science professionals in the labor market in the middle to late 1980s.[5] About two-thirds of reporting countries had increases in the natural sciences, and slightly over half had increases in the proportion of engineering degrees. First university degrees in the natural sciences dropped most notably in Portugal, Denmark, Finland, and Spain, while engineering degrees dropped most notably in the United States, Canada, and Turkey.

Reflecting the overall trends in higher education enrollment and graduation rates, the percentage of the adult population aged 25–64 that attained a higher education increased in the majority of reporting OECD countries between 1989 and 1995, the only years of available data

(Indicator 16). Comparing non-university higher education with university education, the upward trend in educational attainment was most pronounced at the university level. This suggests a shift away from advanced vocational training toward a more general or academic advanced training, mirroring the larger economic shift from the manufacturing to the service sector.

The percentage of adults aged 25–64 who attained at least a university education increased in all OECD countries except Switzerland between 1989 and 1995. The largest gains occurred in Norway, Australia, Belgium, and France. Sweden observed the smallest increase among OECD countries. In 1995 the United States continued to have a far greater percentage of adults with at least a university education than any other G-7 country. In 1995, a quarter of the United States' adult population had at least a university education, compared to 17 percent in Canada, 13 percent in Germany, 12 percent in the United Kingdom, and 11 percent in France.

Although unemployment rates rose in almost every reporting OECD country across all educational levels between 1989 and 1995, individuals with some type of higher education had much lower unemployment rates than their lesser educated counterparts (Indicator 17). Greater levels of education usually translate into transferable skills and overall greater adaptability to the vicissitudes of the labor market. This said, some countries still experienced massive surges in unemployment among individuals with some type of higher education. In countries such as Finland, Sweden, and Switzerland, the unemployment rate among persons aged 25–64 with a non-university higher education more than quadrupled between 1989 and 1995, reflecting the effect of an economic recession. The pattern was similar although less pronounced among individuals with at least a university education.

The unemployment rate of university-educated individuals was consistently lower than that of individuals with a non-university higher education, usually by at least one percentage point. With the exception of Spain, Italy, Greece, Germany, France, and Finland, the unemployment rate of individuals with a non-university higher education never exceeded 7.5 percent and that of individuals with at least a university education never exceeded 4.6 percent in 1995. Among reporting G-7 countries, the United States consistently had among the lowest unemployment rates of individuals with some form of higher education between 1989 and 1995.

The 1995 data on labor force participation of individuals with some type of higher education is consistent with data on unemployment (Indicator 17). Individuals with some form of higher education are more likely to be in the labor force than their less educated counterparts. Furthermore, persons with at least a university education are, on average across all OECD countries, nine percentage points more likely to be in the labor force than persons with only a secondary level education. Labor force participation rates averaged 89 percent across OECD countries for individuals with at least a university education, 87 percent for individuals with a non-university higher education, 80 percent for those with an upper secondary education, and 64 percent for those not completing upper secondary. This illustrates the positive relationship between education and employment.

Reported data regarding the relationship between educational attainment and earnings are consistent with other indicators of the relationship between education and labor market outcomes (Indicator 18). Individuals with a higher education earn substantially more than their less educated counterparts, although there is evidence that this earnings advantage differs across men and women.[6]

However, non-university higher education in most reporting OECD countries yields a considerably smaller earnings advantage than university education. The earnings advantage of a non-university higher education over an upper secondary education in 1995 ranged from 4 percent in Denmark to 45 percent in Switzerland. In contrast, the earnings advantage of a university education over an upper secondary education in the same year ranged from 33 percent in Denmark to 79 percent in the United Kingdom.

Among G-7 countries reporting data in 1995, the United Kingdom, the United States, and France all reported an earnings advantage of around 75 percent for people with a university degree over an upper secondary education. This earnings advantage was smallest in Italy at about 34 percent. The earnings advantage for persons with a non-university higher education in G-7 countries was considerably smaller, ranging from a low of 10 percent in Canada, to 19 percent in the United States, to a high of 32 percent in the United Kingdom. These differences may reflect the differing values of advanced vocational training in these countries.

Summary and conclusion

The period spanning the years 1985 through 1995 witnessed important social, political, and economic changes for many OECD countries. Partly as a reaction to these turbulent forces, and partly due to shifts in demographic composition, governments were confronted with important and long-ranging decisions regarding the delivery of education services. In light of a shrinking youth population and increasing budget deficits, should countries decrease resources spent on education? At the same time, with increasing demands for high-level, specialized skills in the labor market, should countries reallocate education resources from the primary and secondary levels to higher education? With increasing student/teacher ratios, how are governments insuring that they continue delivering a quality education? These are all questions that most—if not all—OECD countries had to face during this period. The various responses are reflected in the individual countries' education trends in the areas of enrollment, finance, education, and labor market outcomes.

Overall, education trends between 1985 and 1995 across OECD countries reflect a good deal of advances and only few retreats. It is clear that in this period, countries made significant improvements in providing access to all levels of education, especially in developing economies like Portugal or Turkey. Highly developed economies such as those of the G-7 countries also made progress in increasing the percentage of their citizens enrolling and graduating from primary, secondary, and higher education institutions.

By raising the overall educational levels of their citizens, many OECD countries were also able to raise their standards of living by providing lowered risks of unemployment, combined with higher earnings. This not only benefits individuals, but countries as well, since a high level of education is associated with economic growth and productivity.

Furthermore, in these eleven years, many countries managed to eliminate the gender gap in access to and graduation from higher education institutions. While these changes reflected larger ones in the society, it remains to be seen whether these gains will be translated into parity in wages and types of jobs among women and men in the near future.

Education systems of OECD countries also had to respond to shifting economic conditions throughout the years 1985–1995. While some of these responses resulted in lower public direct expenditures and constant teacher salaries in some countries, overall OECD countries were able to maintain the educational gains of previous decades. The way OECD governments address current issues about the increasing cost of education, the quality of the teacher pool, the role of technology in the classroom, and the decline of education standards will determine individual countries' education policies into the next decade and beyond.

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INDICATORS

PART I: DEMOGRAPHIC AND SOCIOECONOMIC CONTEXT OF EDUCATION

Indicator 1: Contextual country characteristics

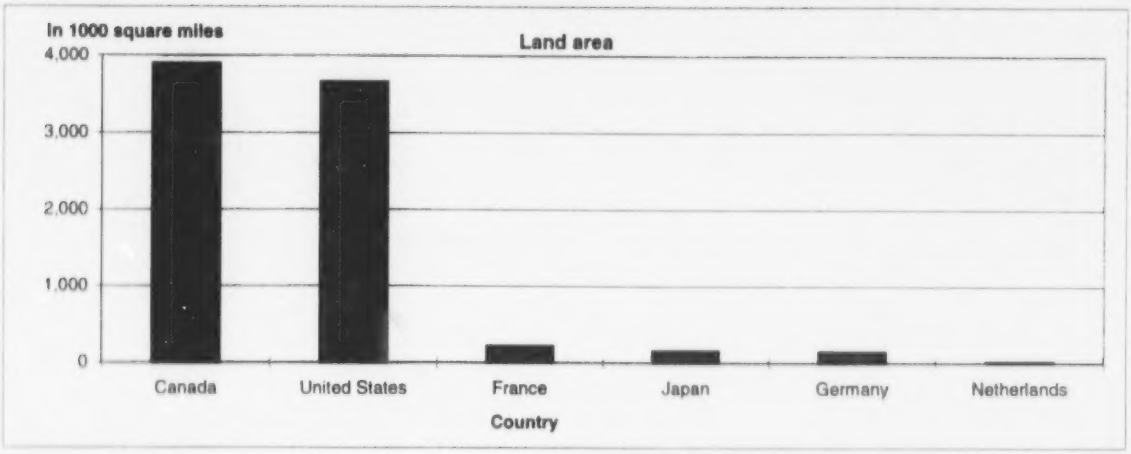
This indicator presents contextual demographic and socio-economic characteristics necessary to understand the framework in which education systems operate. Often, a country's land area, population size, density, and dominant sectors of employment influence the organization of its education system. For example, countries with large, sparsely populated areas may face greater challenges in providing education services, since resources must be spread over a wider geographic area. Furthermore, population size and density both affect the demand for and location of education services. The dominant sector of employment can also affect the emphasis put on various education programs (e.g., vocational vs. academic).

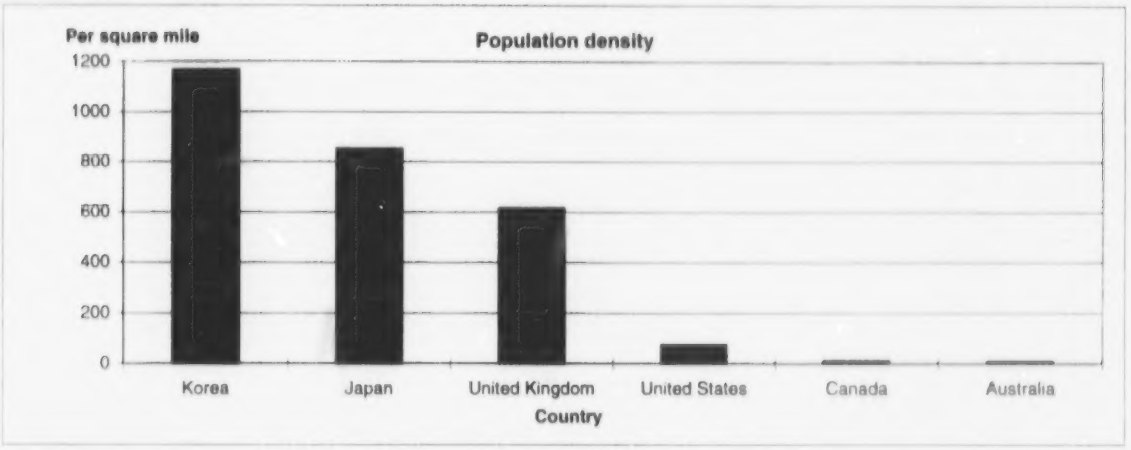
- Canada, the United States, and Australia have the largest land masses of all OECD countries, followed by Mexico, Turkey, and France. The OECD countries with the smallest land masses are, from the smallest, Luxembourg, Belgium, Switzerland and the Netherlands (these last two are tied).

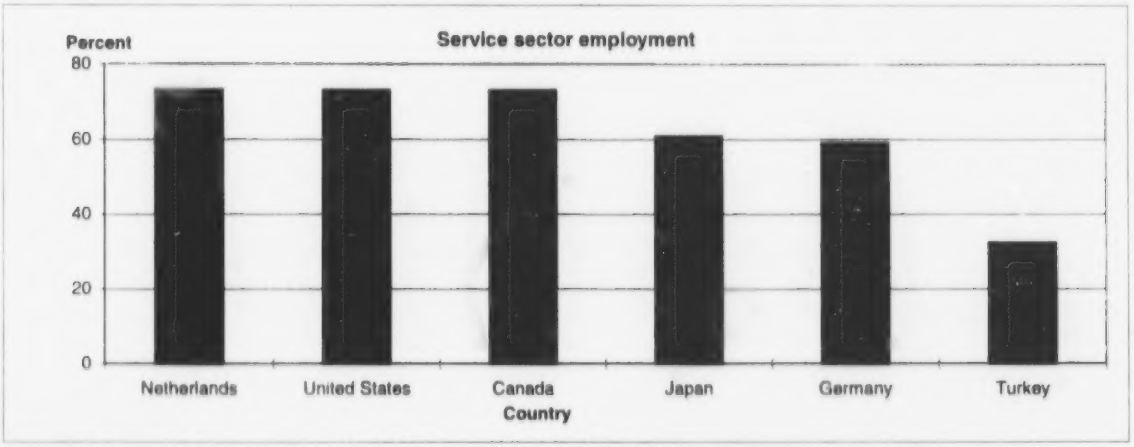
- As of 1995, the most heavily populated OECD countries were the United States, Japan, and Mexico, while the least populated were Iceland, Luxembourg, and New Zealand. Population density per square mile was highest in Korea, the Netherlands, Japan and Belgium (tied), and lowest in Australia, Canada and Iceland (tied). Of the 29 OECD countries, the United States ranked 22nd in population density with an average of 45 people per square mile.

- In 1995, all but two OECD countries, Turkey and Poland, reported the majority of employment in the service sector. Service sector employment was highest in the Netherlands, the United States, and Canada (73 percent or more). Virtually all of the OECD countries reported between a fifth and a third of all employment in industry, although it was higher in the Czech Republic and Germany. The agriculture sector remained an important component of the economies of Turkey, Poland, Mexico, and Greece, accounting for more than one fifth of all jobs.

Indicator 1.—Contextual country characteristics: 1995







SOURCE: Organization for Economic Co-operation and Development (OECD), *OECD in Figures: 1997*, 1997; Organization for Economic Co-operation and Development (OECD), *Labour Force Statistics 1976-1996, 1997*.

Table 1.—Contextual characteristics of OECD countries: 1995

Country	Total area in thousand square miles	Population: 1995		Employment by sector: 1995[1]		
		Thousands	Density per square mile	Agriculture	Industry	Services
Australia	3,003	18,049	6	5.0	22.9	72.1
Austria	33	8,047	246	[2] 7.2	[2] 33.2	[2] 59.6
Belgium	12	10,137	851	2.5	26.5	71.0
Canada	3,897	29,615	8	4.1	23.0	73.0
Czech Republic	31	10,331	335	6.6	42.2	51.2
Denmark	17	5,228	311	4.4	27.4	68.1
Finland	132	5,108	39	7.7	27.7	64.6
France	214	58,143	271	4.7	[3] 25.9	[3] 69.5
Germany	139	81,661	586	3.3	37.5	59.1
Greece	52	10,454	203	20.4	23.2	56.4
Hungary	36	10,229	282	8.1	33.1	58.8
Iceland	40	267	7	9.0	24.6	65.5
Ireland	27	3,598	131	11.7	27.7	60.7
Italy	118	57,283	487	7.5	32.3	60.3
Japan	148	125,570	851	5.7	33.6	60.7
Korea	39	45,093	1,166	12.5	33.2	54.3
Luxembourg	1	413	407	2.7	—	—
Mexico	771	94,780	123	23.5	21.7	54.8
Netherlands	16	15,459	970	3.7	22.4	73.2
New Zealand	105	3,580	34	9.7	25.0	65.2
Norway	127	4,348	34	5.2	23.4	71.5
Poland	122	38,588	316	22.6	32.0	45.4
Portugal	36	9,918	275	11.3	32.3	56.4
Russia[4]	—	—	—	—	—	—
Spain	197	39,210	199	9.2	30.1	60.8
Sweden	176	8,847	50	3.1	25.9	71.0
Switzerland	16	7,062	438	4.2	28.8	67.0
Turkey	305	61,646	202	46.8	21.0	32.2
United Kingdom	96	58,606	613	2.0	27.4	70.5
United States	3,661	263,168	72	2.9	24.0	73.1

— No data were reported or data were incomplete or inconsistent.

[1]Percentage of the total labor force employed in each sector.

[2]1994 data.

[3]1996 data.

[4]Not an OECD member country.

NOTE: Countries in bold are G-7 countries. Square miles rounded to the nearest thousand.

SOURCE: Organization for Economic Co-operation and Development (OECD). *OECD in Figures: 1997*. 1997; Organization for Economic Co-operation and Development (OECD). *Labour Force Statistics 1976-1996*. 1997.

Indicator 2: Youth and population

This indicator provides information on the population size and age composition for OECD member countries and Russia. The three age cohorts presented (5 to 13, 14 to 17, and 18 to 24) represent the theoretical age cohorts for primary and lower secondary education, upper secondary education, and tertiary education, respectively. The size of the youth population in a particular country is an indicator of the potential demand for education services. Among countries of comparable wealth, a country with a relatively large youth population would have to spend a greater percentage of its GDP on education for each young person to have the opportunity to receive the same education services as young people in other countries. Trends in the proportion of youth in the population are used to estimate the amount of funding a government must provide to its education system, now and in the future.

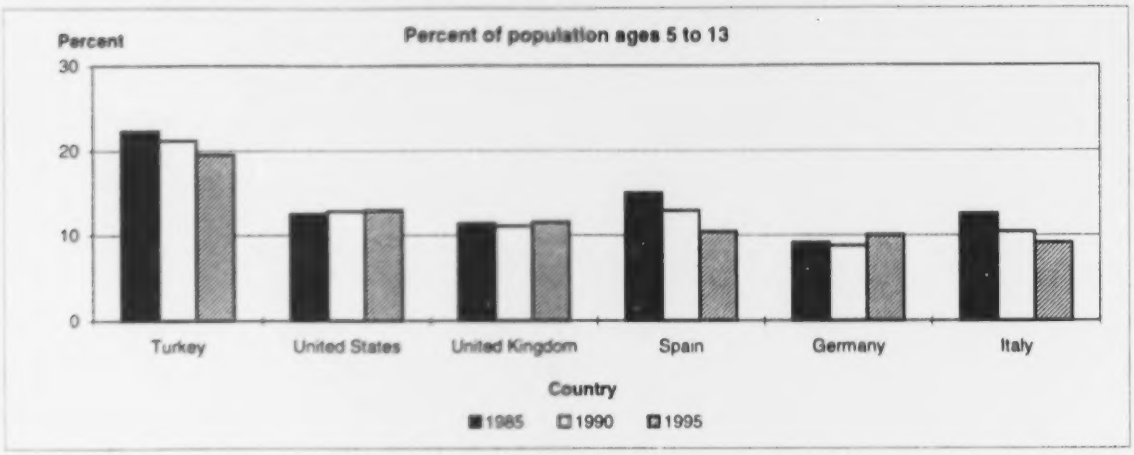
- In virtually every OECD country with available data, the percentage of the population age 5 to 24 decreased between 1985 and 1995. The largest declines occurred in Italy and the Netherlands. Most declines were of a magnitude greater than 3 percentage points, with the exception of Finland, France, Greece, Sweden, and the United States.

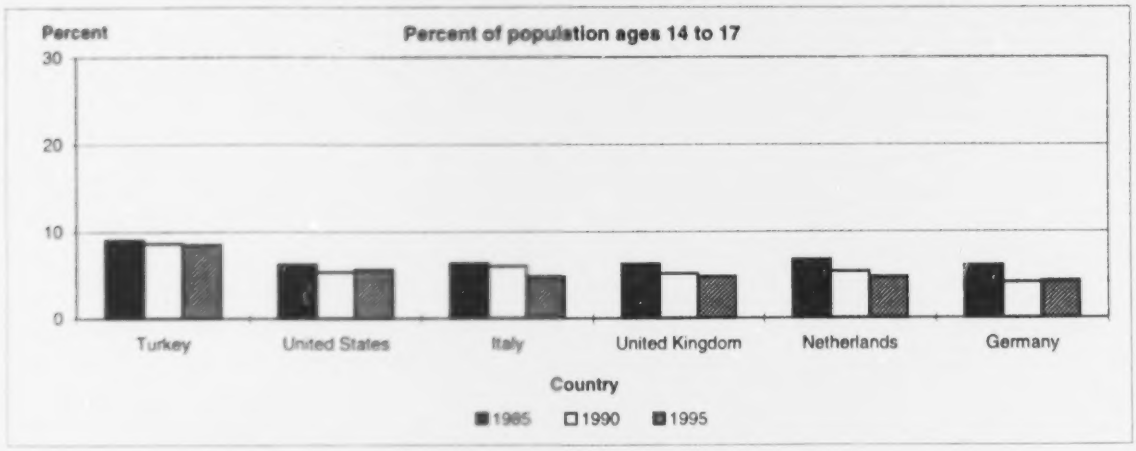
- Between 1985 and 1995, the percentage of the population age 5 to 13 declined in the majority of reporting OECD countries, with the exception of Germany, the United States, Luxembourg, and the United Kingdom. The largest declines occurred in Spain, Portugal, and Italy. Across all years, Turkey and Mexico tended to have a significantly larger percentage of 5- to 13-year-olds than other OECD nations.

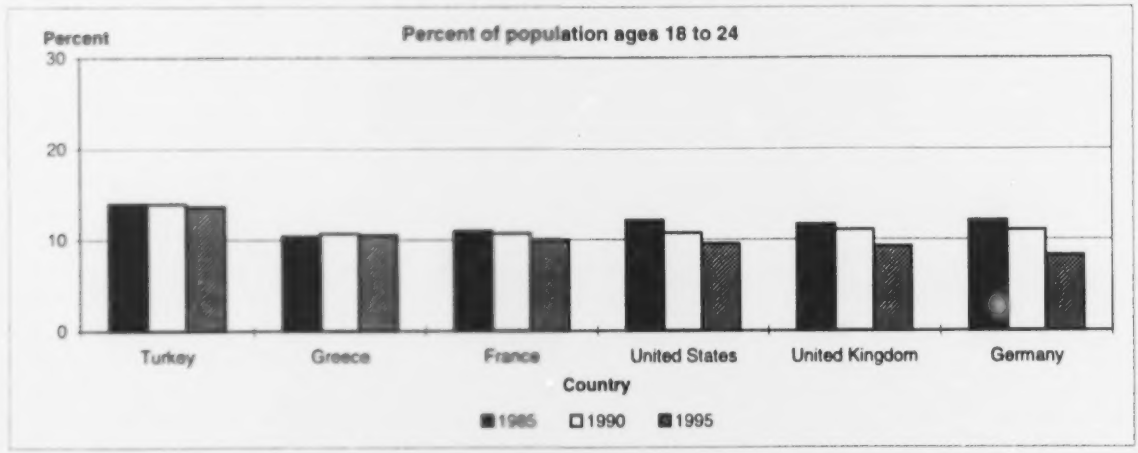
- In all countries for which data are available, the percentage of the population age 14 to 17 declined between 1985 and 1995. Among G-7 nations, Germany, Italy, and the United Kingdom experienced drops of 1.5 percentage points or more. The United States had the smallest drop (.6 points) of reporting G-7 countries in its percentage of 14- to 17-year-olds.

- The percentage of the population age 18 to 24 declined in the vast majority of OECD countries. Only Greece and Spain experienced a rise of .1 percentage points in their percentage of 18- to 24-year-olds. Among the G-7 nations, Germany observed the largest decrease (3.9 percentage points), followed by the United States (2.5 percentage points) and the United Kingdom (2.3 percentage points).

Indicator 2.—Youth and population: 1985, 1990, and 1995







SOURCE: Organization for Economic Co-operation and Development (OECD), *Labour Force Statistics 1976-1996*, 1997; U.S. Department of Commerce, Bureau of the Census, International Database, 1998.

Table 2-1.—Percentage of total population ages 5–24: 1985–1995

Country	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1985–95 change[1]
Australia	—	32.3	31.2	31.5	31.0	30.7	30.5	30.1	29.8	29.5	29.1	—
Austria	29.6	29.2	28.7	28.1	27.6	27.0	26.4	26.0	25.5	25.0	24.5	-5.1
Belgium	28.4	28.0	27.6	27.2	26.8	26.3	25.8	25.5	25.2	25.0	24.8	-3.6
Canada	—	—	—	—	—	—	28.1	27.7	27.4	27.2	27.0	—
Czech Republic	—	—	—	—	—	—	29.8	29.8	29.7	29.6	29.5	—
Denmark	28.8	28.5	28.2	27.7	27.1	26.5	25.9	25.3	24.8	24.5	24.3	-4.5
Finland	27.8	27.4	27.1	26.8	26.5	26.2	25.8	25.6	25.3	25.1	25.0	-2.8
France	30.0	29.7	29.5	29.3	28.9	28.6	28.3	28.0	27.8	27.5	27.2	-2.8
Germany[2]	27.2	26.6	26.1	25.2	24.4	23.8	23.9	23.4	23.1	22.8	22.5	-4.7
Greece	29.4	29.7	29.6	29.6	29.5	29.3	28.9	28.5	28.0	27.5	27.0	-2.4
Hungary	—	—	—	—	—	28.5	28.6	28.6	28.5	28.4	28.3	—
Iceland	35.4	35.0	34.5	34.1	33.9	33.2	32.5	31.9	31.6	31.5	31.6	-3.8
Ireland	—	37.3	37.1	36.8	36.5	36.2	36.0	35.8	35.5	35.0	34.4	—
Italy	30.1	29.6	29.1	28.6	28.0	27.7	27.0	26.3	25.6	25.0	24.4	-5.7
Japan	—	—	—	—	—	28.3	28.1	27.8	27.3	38.1	26.0	—
Korea	—	—	—	—	—	38.6	37.9	37.1	36.3	35.2	34.3	—
Luxembourg	26.8	26.3	25.8	25.3	24.7	24.4	24.1	23.7	23.6	23.6	23.1	-3.7
Mexico	—	—	—	—	—	—	—	46.0	45.7	46.4	44.9	—
Netherlands	30.9	30.3	29.7	29.1	28.5	27.8	27.2	26.8	26.3	25.9	25.3	-5.6
New Zealand	—	34.3	33.4	32.7	31.1	31.4	31.1	31.1	28.4	30.8	30.4	—
Norway	29.6	29.3	29.0	28.7	28.4	27.9	27.4	27.0	26.6	26.4	26.1	-3.5
Poland	—	—	—	—	—	31.3	31.6	31.7	31.8	32.0	32.0	—
Portugal	33.5	33.1	32.8	32.3	31.9	31.4	30.8	30.4	29.8	29.3	28.8	-4.7
Russia[3]	—	—	—	—	—	—	—	29.1	29.5	29.9	30.2	—
Spain	33.6	33.4	33.0	32.5	32.0	31.4	31.1	30.5	29.9	29.2	28.5	-5.1
Sweden	26.5	26.3	26.2	25.9	25.6	25.2	24.8	24.6	24.3	24.2	24.4	-2.1
Switzerland	27.4	26.9	26.5	26.0	25.8	25.3	24.8	24.4	24.1	23.8	23.6	-3.8
Turkey	45.3	45.1	44.9	44.6	44.2	43.7	43.4	43.0	42.6	42.1	41.7	-3.6
United Kingdom	29.3	29.1	28.7	28.2	27.7	27.3	26.8	26.4	26.1	25.8	25.6	-3.7
United States	30.9	30.4	29.9	29.6	29.2	28.9	28.6	28.4	28.3	28.2	28.1	-2.8
Average[4]	30.5	30.2	29.8	29.4	29.0	28.5	28.1	27.7	27.3	27.0	26.7	-3.9

— No data were reported or data were incomplete or inconsistent.

[1]Percentage points change between 1985 and 1995.

[2]Pre-1991 numbers refer to Western Germany (Federal Republic of Germany before unification).

[3]Not an OECD member country.

[4]Average is for countries reporting data for all years included in the table.

NOTE: Countries in bold are G-7 countries.

SOURCE: Organization for Economic Co-operation and Development (OECD). *Labour Force Statistics 1976-96*, 1997. U.S. Department of Commerce, Bureau of the Census, International Database, 1998.

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Table 2-2.—Percentage of total population ages 5–13: 1985–1995

Country	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1985–95 change[1]
Australia	—	13.9	13.0	13.3	13.1	13.0	13.0	13.0	13.0	13.0	13.0	—
Austria	11.0	10.7	10.6	10.6	10.5	10.4	10.4	10.5	10.5	10.6	10.5	-0.5
Belgium	11.4	11.3	11.1	11.0	11.0	10.9	10.9	10.8	10.8	10.7	10.7	-0.7
Canada	—	—	—	—	—	—	12.4	12.3	12.3	12.2	12.2	—
Czech Republic	—	—	—	—	—	—	12.9	12.4	12.0	11.7	11.5	—
Denmark	12.0	11.7	11.2	10.9	10.5	10.1	9.9	9.8	9.7	9.6	9.7	-2.3
Finland	11.5	11.5	11.6	11.8	11.8	11.8	11.6	11.5	11.4	11.4	11.4	-0.1
France	12.8	12.6	12.4	12.3	12.1	12.1	12.1	12.1	12.1	12.1	12.0	-0.8
Germany[2]	9.1	8.8	8.7	8.6	8.7	8.7	9.5	9.7	9.8	10.0	10.0	0.9
Greece	12.7	13.4	13.2	13.1	12.9	12.7	12.3	11.9	11.5	11.1	10.7	-2.0
Hungary	—	—	—	—	—	12.5	12.1	11.7	11.4	11.1	11.0	—
Iceland	15.7	15.7	15.4	15.2	15.2	15.0	14.6	14.4	14.4	14.3	14.3	-1.4
Ireland	—	17.8	17.7	17.6	17.5	17.3	17.0	16.8	16.4	15.9	15.4	—
Italy	12.6	12.1	11.6	11.2	10.7	10.4	10.0	9.7	9.4	9.2	9.1	-3.5
Japan	—	—	—	—	—	11.6	11.2	10.9	10.6	21.6	10.0	—
Korea	—	—	—	—	—	16.3	15.9	15.5	15.0	14.5	14.0	—
Luxembourg	10.2	10.0	10.0	10.0	10.0	10.0	10.1	10.1	10.3	10.4	10.4	0.2
Mexico	—	—	—	—	—	—	—	22.2	21.9	21.7	21.4	—
Netherlands	11.9	11.5	11.2	11.0	10.8	10.7	10.7	10.7	10.7	10.7	10.8	-1.1
New Zealand	—	14.7	14.2	13.8	13.5	13.2	13.0	13.0	13.1	13.1	13.2	—
Norway	12.5	12.1	11.7	11.5	11.2	11.0	10.9	10.9	10.9	11.1	11.2	-1.3
Poland	—	—	—	—	—	15.7	15.6	15.4	15.2	15.0	14.7	—
Portugal	15.0	14.7	14.5	14.2	13.9	13.4	12.8	12.2	11.7	11.3	10.9	-4.1
Russia[3]	—	—	—	—	—	—	—	14.1	14.3	14.4	14.4	—
Spain	15.0	14.7	14.3	13.9	13.4	12.9	12.6	12.0	11.4	10.9	10.5	-4.5
Sweden	11.3	11.0	10.8	10.6	10.4	10.2	10.2	10.3	10.4	10.6	10.8	-0.5
Switzerland	10.6	10.3	10.1	10.0	10.1	10.1	10.1	10.1	10.2	10.3	10.4	-0.2
Turkey	22.3	22.2	22.0	21.8	21.5	21.2	20.9	20.6	20.3	19.9	19.6	-2.7
United Kingdom	11.4	11.2	11.1	11.0	11.0	11.1	11.2	11.3	11.4	11.5	11.5	0.1
United States	12.5	12.5	12.6	12.7	12.7	12.8	12.8	12.9	12.9	12.9	13.0	0.5
Average[4]	12.7	12.5	12.3	12.2	12.0	11.9	11.8	11.7	11.6	11.5	11.4	-1.3

— No data were reported or data were incomplete or inconsistent.

[1]Percentage points change between 1985 and 1995.

[2]Pre-1991 numbers refer to Western Germany (Federal Republic of Germany before unification).

[3]Not an OECD member country.

[4]Average is for countries reporting data for all years included in the table.

NOTE: Countries in bold are G-7 countries.

SOURCE: Organization for Economic Co-operation and Development (OECD), *Labour Force Statistics 1976-96*, 1997; U.S. Department of Commerce, Bureau of the Census, International Database, 1998.

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Table 2-3.—Percentage of total population ages 14–17: 1985–1995

Country	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1985-95 change[1]
Australia	—	6.7	6.7	6.6	6.4	6.3	6.1	5.9	5.8	5.6	5.5	—
Austria	6.4	6.2	5.9	5.6	5.3	5.1	4.8	4.7	4.6	4.5	4.5	-1.9
Belgium	5.8	5.7	5.6	5.5	5.3	5.1	4.9	4.8	4.8	4.8	4.9	-0.9
Canada	—	—	—	—	—	—	5.4	5.4	5.3	5.3	5.3	—
Czech Republic	—	—	—	—	—	—	7.1	7.0	6.9	6.6	6.3	—
Denmark	5.8	5.7	5.7	5.7	5.7	5.7	5.5	5.3	5.1	4.9	4.7	-1.1
Finland	5.5	5.3	5.0	4.8	4.8	4.9	5.0	5.2	5.2	5.2	5.1	-0.4
France	6.2	6.2	6.3	6.2	6.1	5.8	5.5	5.3	5.2	5.2	5.3	-0.9
Germany[2]	6.1	5.7	5.2	4.7	4.4	4.1	4.0	4.0	4.1	4.2	4.3	-1.8
Greece	6.2	6.1	6.1	6.1	6.0	6.0	5.9	5.9	5.9	5.9	5.8	-0.4
Hungary	—	—	—	—	—	6.6	6.9	6.9	6.7	6.3	6.0	—
Iceland	6.7	6.6	6.7	6.8	6.8	6.8	6.5	6.3	6.2	6.2	6.4	-0.3
Ireland	—	7.8	7.8	7.8	7.8	7.8	7.7	7.6	7.5	7.6	7.8	—
Italy	6.3	6.3	6.2	6.1	6.1	6.0	5.8	5.6	5.3	5.0	4.8	-1.5
Japan	—	—	—	—	—	6.4	6.2	5.9	5.6	5.4	5.2	—
Korea	—	—	—	—	—	8.2	7.8	7.5	7.2	7.0	6.9	—
Luxembourg	5.5	5.3	5.0	4.8	4.5	4.4	4.3	4.2	4.3	4.3	4.3	-1.2
Mexico	—	—	—	—	—	—	—	9.4	9.3	10.2	9.0	—
Netherlands	6.8	6.7	6.5	6.1	5.7	5.4	5.1	4.9	4.8	4.7	4.7	-2.1
New Zealand	—	7.5	7.4	7.3	7.0	6.7	6.4	6.1	5.9	5.7	5.6	—
Norway	6.4	6.4	6.3	6.1	6.0	5.8	5.5	5.2	5.0	4.9	4.9	-1.5
Poland	—	—	—	—	—	6.3	6.5	6.6	6.7	6.7	6.8	—
Portugal	6.7	6.7	6.8	6.8	6.8	6.9	6.9	6.9	6.6	6.4	6.1	-0.6
Russia[3]	—	—	—	—	—	—	—	5.7	5.8	5.9	5.9	—
Spain	6.8	6.8	6.8	6.8	6.8	6.7	6.8	6.8	6.6	6.4	6.2	-0.6
Sweden	5.4	5.3	5.3	5.3	5.3	5.2	5.0	4.9	4.6	4.5	4.5	-0.9
Switzerland	5.8	5.6	5.4	5.2	5.1	4.8	4.7	4.5	4.5	4.4	4.5	-1.3
Turkey	9.0	8.9	8.8	8.7	8.7	8.6	8.6	8.6	8.6	8.6	8.5	-0.5
United Kingdom	6.3	6.2	6.0	5.7	5.4	5.1	4.9	4.7	4.6	4.7	4.8	-1.5
United States	6.2	6.2	6.0	5.7	5.5	5.3	5.3	5.4	5.4	5.5	5.6	-0.6
Average[4]	6.3	6.2	6.1	5.9	5.8	5.7	5.5	5.4	5.3	5.3	5.3	-1.1

— No data were reported or data were incomplete or inconsistent.

[1]Percentage points change between 1985 and 1995.

[2]Pre-1991 numbers refer to Western Germany (Federal Republic of Germany before unification).

[3]Not an OECD member country.

[4]Average is for countries reporting data for all years included in the table.

NOTE: Countries in bold are G-7 countries.

SOURCE: Organization for Economic Co-operation and Development (OECD). *Labour Force Statistics 1976-96*. 1997. U.S. Department of Commerce, Bureau of the Census, International Database. 1998.

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Table 2-4.—Percentage of total population ages 18–24: 1985–1995

Country	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1985–95 change[1]
Australia	—	11.7	11.6	11.6	11.5	11.4	11.3	11.2	11.1	10.9	10.6	—
Austria	12.2	12.2	12.2	12.0	11.7	11.5	11.2	10.9	10.4	10.0	9.5	-2.7
Belgium	11.2	11.0	10.8	10.7	10.5	10.3	10.1	9.8	9.6	9.4	9.2	-2.0
Canada	—	—	—	—	—	—	10.3	10.0	9.8	9.7	9.5	—
Czech Republic	—	—	—	—	—	—	9.8	10.3	10.8	11.3	11.7	—
Denmark	11.0	11.2	11.2	11.1	10.8	10.7	10.5	10.2	10.0	10.0	9.8	-1.2
Finland	10.8	10.7	10.5	10.2	9.9	9.6	9.2	8.9	8.7	8.5	8.5	-2.3
France	10.9	10.9	10.8	10.8	10.7	10.6	10.6	10.6	10.4	10.2	10.0	-0.9
Germany[2]	12.1	12.1	12.1	11.8	11.4	11.0	10.3	9.7	9.2	8.7	8.2	-3.9
Greece	10.4	10.2	10.3	10.4	10.5	10.7	10.7	10.6	10.6	10.6	10.5	0.1
Hungary	—	—	—	—	—	9.4	9.7	10.0	10.5	10.9	11.3	—
Iceland	13.0	12.7	12.4	12.1	11.9	11.5	11.3	11.2	11.0	11.0	10.9	-2.1
Ireland	—	11.7	11.6	11.4	11.3	11.2	11.2	11.4	11.5	11.5	11.2	—
Italy	11.2	11.3	11.3	11.3	11.2	11.3	11.2	11.0	10.9	10.8	10.5	-0.7
Japan	—	—	—	—	—	10.4	10.8	11.0	11.1	11.0	10.8	—
Korea	—	—	—	—	—	14.2	14.2	14.1	14.0	13.8	13.4	—
Luxembourg	11.1	11.0	10.8	10.5	10.2	10.0	9.8	9.3	9.1	8.9	8.5	-2.6
Mexico	—	—	—	—	—	—	—	14.4	14.5	14.5	14.5	—
Netherlands	12.2	12.1	12.0	12.0	11.9	11.7	11.5	11.2	10.8	10.4	9.8	-2.4
New Zealand	—	12.1	11.8	11.7	10.6	11.5	11.7	12.0	9.5	11.9	11.6	—
Norway	10.7	10.8	11.0	11.1	11.2	11.1	11.0	10.8	10.7	10.4	10.0	-0.7
Poland	—	—	—	—	—	9.3	9.5	9.7	10.0	10.3	10.6	—
Portugal	11.8	11.7	11.5	11.3	11.2	11.1	11.1	11.3	11.5	11.7	11.8	0.0
Russia[3]	—	—	—	—	—	—	—	9.2	9.4	9.6	9.8	—
Spain	11.7	11.8	11.9	11.9	11.8	11.8	11.7	11.8	11.8	11.8	11.8	0.1
Sweden	9.8	10.0	10.0	10.0	9.9	9.8	9.6	9.5	9.3	9.1	9.0	-0.8
Switzerland	11.0	11.0	10.9	10.8	10.7	10.4	10.1	9.8	9.4	9.0	8.8	-2.2
Turkey	13.9	14.0	14.1	14.1	14.0	13.9	13.8	13.8	13.7	13.6	13.6	-0.3
United Kingdom	11.6	11.7	11.6	11.5	11.3	11.1	10.7	10.4	10.0	9.6	9.3	-2.3
United States	12.1	11.7	11.4	11.2	11.0	10.7	10.4	10.2	10.0	9.8	9.6	-2.5
Average[4]	11.5	11.5	11.4	11.3	11.2	11.0	10.8	10.6	10.4	10.2	10.0	-1.5

— No data were reported or data were incomplete or inconsistent.

[1]Percentage points change between 1985 and 1995.

[2]Pre-1991 numbers refer to Western Germany (Federal Republic of Germany before unification).

[3]Not an OECD member country.

[4]Average is for countries reporting data for all years included in the table.

NOTE: Countries in bold are G-7 countries.

SOURCE: Organization for Economic Co-operation and Development (OECD). *Labour Force Statistics 1976-96*. 1997. U.S. Department of Commerce, Bureau of the Census, International Database, 1998.

Indicator 3: Economic context

A country's level of economic development has implications for the extent and structure of its education system. All things being equal, richer countries have more potential resources available to spend on the education and training of their population.

Gross Domestic Product (GDP) per capita is a measure that relates the size of a country's economy to the size of its population. GDP per capita is measured here in constant 1995 dollars to equate the measure across years. Purchasing power parity, the rate of currency conversion which adjusts for differences in the cost of living across countries, is used to equate the measure across the different countries. GDP per capita provides an indication of the potential resources available in a country to support its education system.

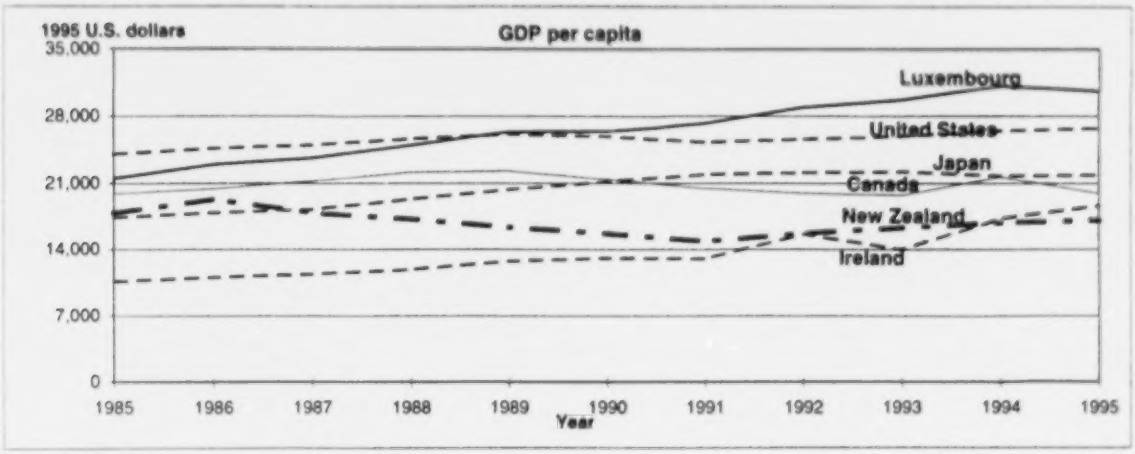
The unemployment rate shows the percentage of the labor force that is currently without work and seeking employment, and is an important indicator of the overall status of a country's economy. In many industrialized countries, employment is related to education, as more highly educated people are more likely to have the skills necessary to obtain and retain a job. In addition, the percentage of youth (under 25) who are unemployed is linked to factors influencing the decision to stay in school or enter the workforce and has implications for the structure and content of education systems.

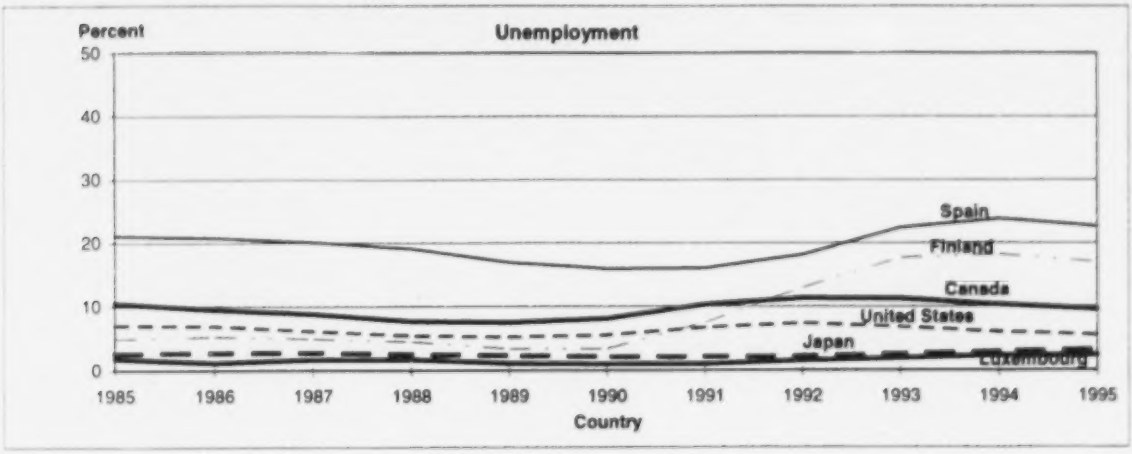
- Between 1985 and 1995 per capita GDP increased in the vast majority of OECD countries, but declined in real terms by 4.1 percent in New Zealand, 3.3 percent in Sweden, 1.7 percent in Australia, and remained relatively constant in Canada. The United States consistently reported one of the highest levels of GDP per capita, and experienced an 11.1 percent growth between 1985 and 1995, slightly below the average OECD growth rate. During this time period, GDP per capita grew in real terms by 75.7 percent in Ireland, 42.3 percent in Luxembourg, and 39.9 percent in Portugal. In several countries, per capita GDP peaked in 1989 and 1990 and then declined in later years.

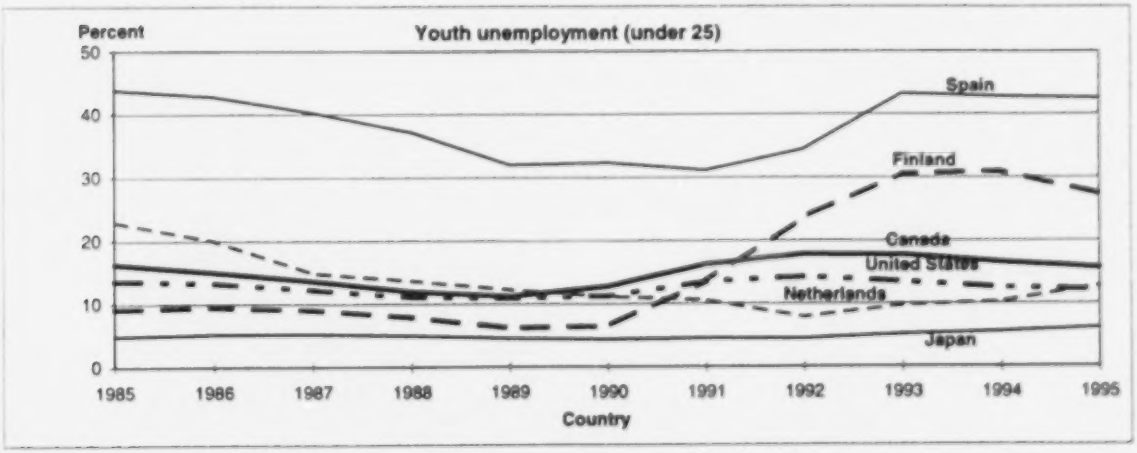
- Spain and Ireland consistently reported some of the highest unemployment rates between 1985 and 1995, although Ireland experienced the largest decrease over the period. In addition, Belgium, France, and Italy consistently posted unemployment rates of around 10 percent or more. Overall, unemployment rates went up in the majority of OECD countries between 1985 and 1995, with the highest increase experienced in Finland. In Japan, Korea, Luxembourg and Switzerland, unemployment rates remained consistently under four percent. Unemployment in both the United States and Canada decreased slightly between 1985 and 1995.

- Youth unemployment was consistently above 30 percent in both Spain and Italy. In contrast, youth unemployment remained under 10 percent throughout the 1985–1995 period in Germany, Japan, Korea, and Luxembourg. Finland experienced the largest increase in youth unemployment and the Netherlands the largest decrease. Both the United States and Canada experienced slight decreases of about one percentage point in their youth unemployment rates.

Indicator 3.—Economic context: 1985–1995







SOURCE: Organization for Economic Co-operation and Development (OECD), *Annual National Accounts*, vol. 1, 1997; Organization for Economic Co-operation and Development (OECD), *Labour Force Statistics 1976-1996, 1997*.

Table 3-1.—Gross domestic product per capita at constant (1995) prices based on PPPs: 1985–1995

Country	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1985-95 change[1]
Australia	$19,626	$19,142	$20,576	$20,324	$20,783	$18,490	$17,920	$17,984	$18,332	$20,279	$19,298	-1.7
Austria	17,573	17,750	17,877	18,441	19,034	19,570	19,600	20,540	20,175	20,631	20,574	17.1
Belgium	17,163	17,492	17,759	18,505	19,056	19,399	19,591	20,882	20,776	21,098	21,191	23.5
Canada	19,921	20,468	21,252	22,138	22,277	21,392	20,481	19,997	19,786	21,679	19,963	0.2
Czech Republic	—	—	—	—	—	—	—	—	—	10,063	—	—
Denmark	18,317	19,050	19,077	19,149	19,338	19,281	19,536	19,761	20,194	21,022	21,306	16.3
Finland	16,810	17,609	17,835	18,851	19,448	19,133	17,904	16,304	16,464	16,658	17,362	3.3
France	18,245	18,662	18,860	19,650	20,026	20,270	20,445	20,706	19,615	19,886	19,669	7.8
Germany[2]	19,234	19,927	19,873	20,924	20,976	21,296	19,010	19,759	19,573	20,016	20,174	4.9
Greece	10,003	10,196	10,074	10,476	10,961	10,788	11,052	11,700	11,655	11,894	11,951	19.5
Hungary	—	—	—	—	—	—	—	—	—	6,480	—	—
Iceland	18,265	19,504	20,772	20,315	19,909	20,172	20,159	19,935	19,757	19,901	19,971	9.3
Ireland	10,615	11,053	11,400	11,909	12,769	13,089	13,019	15,627	14,003	17,250	18,647	75.7
Italy	16,487	17,021	17,445	18,064	18,493	18,956	19,226	19,878	18,683	19,178	19,469	18.1
Japan	17,384	17,916	18,232	19,328	20,362	21,162	21,919	22,129	22,219	21,790	21,865	25.8
Korea	—	—	—	—	—	—	—	—	—	10,655	—	—
Luxembourg	21,528	22,990	23,645	24,973	26,397	26,444	27,261	28,978	29,731	31,187	30,626	42.3
Mexico	—	—	—	—	—	—	—	—	—	7,477	—	—
Netherlands	16,637	17,409	17,534	17,368	18,245	18,312	18,312	19,285	19,099	19,554	19,664	18.2
New Zealand	17,819	19,351	17,878	17,206	16,326	15,656	14,840	15,686	16,322	16,833	17,084	-4.1
Norway	19,565	20,494	20,575	20,392	20,453	20,485	20,878	22,099	22,637	22,605	22,974	17.4
Poland	—	—	—	—	—	—	—	—	—	5,103	—	—
Portugal	8,904	9,340	9,813	10,310	10,731	10,957	11,381	12,009	12,042	12,397	12,457	39.9
Russia[3]	—	—	—	—	—	—	—	—	—	—	—	—
Spain	11,461	11,852	12,408	12,987	13,527	13,824	14,388	14,544	14,169	14,053	14,330	25.0
Sweden	19,090	19,671	19,941	20,261	20,741	20,738	19,721	18,626	17,853	18,110	18,465	-3.3
Switzerland	23,376	23,895	23,693	23,936	24,652	25,056	24,956	25,759	25,317	24,922	24,582	5.2
Turkey	4,276	4,653	4,794	4,861	5,074	5,469	5,492	5,422	5,866	5,420	5,559	30.0
United Kingdom	17,799	18,766	19,856	17,646	18,365	18,548	18,514	18,633	18,957	19,560	19,949	12.1
United States	24,044	24,662	25,019	25,651	26,141	25,914	25,293	25,636	25,893	26,494	26,711	11.1
Average[4]	16,839	17,453	17,758	18,069	18,503	18,517	18,371	18,828	18,713	19,267	19,327	17.2

— No data were reported or data were incomplete or inconsistent.
[1]Percent change between 1985 and 1995.
[2]Pre-1991 numbers refer to Western Germany (Federal Republic of Germany before unification).
[3]Not an OECD member country.
[4]Average is for countries reporting data for all years included in the table.
NOTE: Countries in bold are G-7 countries. PPP stands for purchasing power parity—an adjustment factor. Refer to the supplemental notes for a description of this adjustment.
SOURCE: Organization for Economic Co-operation and Development (OECD), *Annual National Accounts, vol. 1*, 1997.

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Table 3-2.—Unemployment rates: 1985–1995

Country	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1985–95 change[1]
Australia	7.8	7.9	7.8	6.8	5.9	7.2	9.7	10.8	11.0	9.7	8.5	0.7
Austria	3.6	3.1	3.8	3.6	3.1	3.2	3.5	3.6	4.3	3.6	—	—
Belgium	12.3	11.6	11.3	10.3	9.3	8.7	9.3	10.3	12.0	—	—	—
Canada	10.5	9.5	8.8	7.7	7.5	8.1	10.3	11.3	11.2	10.3	9.5	-1.0
Czech Republic	—	—	—	—	—	0.8	4.4	2.7	4.0	3.9	4.1	—
Denmark	7.3	5.5	5.4	6.5	8.1	8.3	9.1	9.0	10.7	8.0	7.0	-0.3
Finland	5.0	5.3	5.0	4.5	3.4	3.4	7.5	13.0	17.7	18.2	17.0	12.0
France	10.2	10.4	10.5	10.0	9.4	8.9	9.4	10.3	11.6	12.3	11.5	1.3
Germany[2]	8.0	7.6	7.6	7.6	6.8	6.2	5.6	6.6	7.9	8.4	8.1	0.1
Greece	7.8	7.4	7.4	7.7	7.5	7.0	7.7	8.7	9.7	9.6	10.0	2.2
Hungary	—	—	—	—	—	—	—	9.8	11.9	10.7	10.2	—
Iceland	0.8	0.8	0.8	0.8	1.6	1.6	2.8	4.2	5.6	5.5	4.7	3.9
Ireland	17.4	17.4	17.6	16.7	15.6	13.7	15.7	15.3	15.7	14.7	12.1	-5.3
Italy	10.1	10.9	11.8	11.8	11.8	11.2	10.8	11.4	10.6	11.5	12.0	1.9
Japan	2.6	2.8	2.8	2.5	2.3	2.1	2.1	2.2	2.5	2.9	3.2	0.6
Korea	4.0	3.8	3.1	2.5	2.6	2.4	2.3	2.4	2.8	2.4	2.0	-2.0
Luxembourg	1.8	1.2	1.7	1.7	1.1	1.0	1.0	1.5	1.9	2.3	2.3	0.5
Mexico	—	—	—	—	—	2.7	3.0	3.1	3.2	3.5	5.7	—
Netherlands	10.9	10.3	9.6	9.2	8.3	7.5	7.0	6.7	6.2	6.8	7.0	-3.9
New Zealand	4.1	4.0	4.0	5.5	7.1	7.7	10.2	10.3	9.4	8.1	6.3	2.2
Norway	2.6	2.0	2.1	3.2	4.9	5.2	5.5	5.9	6.0	5.4	4.9	2.3
Poland	—	—	—	—	—	—	—	13.3	14.0	14.3	13.2	—
Portugal	8.5	8.5	7.0	5.7	5.0	4.5	4.3	4.1	5.5	7.0	7.4	-1.1
Russia[3]	—	—	—	—	—	—	—	—	—	—	—	—
Spain	21.1	20.8	20.1	19.1	16.9	15.9	16.0	18.1	22.4	23.8	22.6	1.5
Sweden	2.8	2.7	1.9	1.6	1.3	1.7	2.9	5.3	8.2	8.0	7.7	4.9
Switzerland	0.9	0.8	0.7	0.6	0.5	0.5	1.9	3.0	3.8	3.6	3.3	2.4
Turkey	6.9	7.7	8.1	8.2	8.4	7.8	7.7	7.9	7.5	7.9	6.8	-0.1
United Kingdom	11.5	11.6	10.4	8.3	6.1	5.5	7.9	9.7	10.3	9.6	8.6	-2.9
United States	7.1	6.9	6.1	5.4	5.2	5.5	6.7	7.4	6.8	6.0	5.5	-1.6
Average[4]	7.4	7.2	7.0	6.7	6.4	6.2	7.1	8.0	8.9	8.8	8.2	0.8

— No data were reported or data were incomplete or inconsistent.

[1]Percentage points change between 1985 and 1995.

[2]Pre-1991 numbers refer to Western Germany (Federal Republic of Germany before unification).

[3]Not an OECD member country.

[4]Average is for countries reporting data for all years included in the table.

NOTE: Countries in bold are G-7 countries.

SOURCE: Organization for Economic Co-operation and Development (OECD). *Labour Force Statistics 1976-1996*. 1997.

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Table 3-3.—Youth unemployment rates (persons under 25 years old): 1985–1995

Country	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1985–95 change[1]
Australia	14.3	14.5	14.6	12.8	10.4	13.2	17.1	19.5	18.6	16.3	14.4	0.1
Austria	—	—	—	—	—	—	—	—	—	4.8	5.9	—
Belgium	23.6	21.1	21.4	18.1	15.5	14.5	14.0	13.2	18.4	21.8	21.5	-2.1
Canada	16.3	15.0	13.6	11.9	11.2	12.7	16.2	17.8	17.7	16.5	15.6	-0.7
Czech Republic	—	—	—	—	—	—	—	—	7.4	7.7	7.9	—
Denmark	11.5	8.1	8.9	8.5	11.5	11.5	11.5	12.3	14.6	10.2	9.9	-1.6
Finland	9.1	9.5	9.0	7.8	6.1	6.4	13.5	23.5	30.5	30.9	27.2	18.1
France	25.6	23.4	22.9	21.6	19.0	19.1	19.4	20.8	24.6	27.5	25.9	0.3
Germany[2]	9.9	9.0	8.5	7.7	6.4	5.6	5.5	6.2	7.6	8.2	8.0	-1.9
Greece	24.2	24.2	25.0	26.0	24.9	23.3	24.5	25.0	28.8	27.7	27.9	3.7
Hungary	—	—	—	—	—	—	—	17.5	21.2	19.4	18.6	—
Iceland	—	—	—	—	—	—	5.0	10.0	10.0	11.6	11.0	—
Ireland	24.1	25.5	24.5	23.9	20.5	17.6	21.7	23.1	25.3	23.2	19.1	-5.0
Italy	33.9	34.5	35.5	34.5	33.6	31.5	30.8	32.7	30.6	32.4	32.0	-1.9
Japan	4.8	5.2	5.2	4.9	4.5	4.3	4.5	4.4	5.1	5.5	6.1	1.3
Korea	—	9.0	7.6	7.2	6.8	7.0	7.4	7.7	9.0	7.2	6.3	—
Luxembourg	6.5	6.2	5.3	4.8	3.0	3.7	2.6	3.5	4.4	7.9	7.2	0.7
Mexico	—	—	—	—	—	—	5.4	5.4	5.4	7.1	9.3	—
Netherlands	22.9	20.0	14.8	13.6	12.2	11.1	10.5	7.8	9.7	10.2	12.8	-10.1
New Zealand	—	7.8	8.0	10.8	13.5	14.1	18.8	18.5	17.2	15.0	11.9	—
Norway	6.5	5.0	5.3	7.9	11.5	11.8	12.8	13.9	13.9	12.6	11.9	5.4
Poland	—	—	—	—	—	—	—	27.8	30.0	32.6	31.2	—
Portugal	19.8	19.2	16.1	12.9	11.3	10.0	9.3	10.0	12.5	14.7	16.0	-3.8
Russia[3]	—	—	—	—	—	—	—	—	—	—	—	—
Spain	43.8	42.8	40.2	37.1	32.0	32.3	31.1	34.4	43.2	42.8	42.5	-1.3
Sweden	5.8	5.6	4.6	3.6	3.2	3.7	6.6	11.4	18.4	16.7	15.4	9.6
Switzerland	—	—	—	—	—	—	3.3	4.7	6.6	6.3	5.8	—
Turkey	—	—	—	17.5	16.5	16.0	15.4	16.2	15.6	15.7	14.7	—
United Kingdom	17.8	17.9	15.8	12.8	10.0	10.1	13.6	15.5	17.4	16.2	15.3	-2.5
United States	13.6	13.3	12.2	11.0	10.9	11.2	13.4	14.2	13.4	12.5	12.1	-1.5
Average[4]	17.6	16.8	16.0	14.8	13.6	13.3	14.7	16.3	18.7	18.6	17.9	0.4

— No data were reported or data were incomplete or inconsistent.

[1]Percentage points change between 1985 and 1995.

[2]Pre-1991 numbers refer to Western Germany (Federal Republic of Germany before unification).

[3]Not an OECD member country.

[4]Average is for countries reporting data for all years included in the table.

NOTE: Countries in bold are G-7 countries.

SOURCE: Organization for Economic Co-operation and Development (OECD), *Labour Force Statistics 1976-96*, 1997.

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PART II: RATES OF PARTICIPATION

Indicator 4: Participation in formal education

In an increasingly global economy, a well-educated population is critical for the current and future economic health of a country. Rates of participation* in formal education can serve as an indicator of the dispersion of knowledge in a given country. Several factors influence participation in formal education, including the availability of an education program, the desirability of an education, and the nation's laws regarding compulsory education. Examining differences in enrollment rates across countries and over time may highlight differences in the value a country places on education or the dependency of its economy on a trained workforce.

- All OECD countries for which data are available showed increases in participation for the 5- to 24-year-old cohort between 1985 and 1995. While enrollment rates in the United States increased by nearly 6 percentage points between 1985 and 1995, the largest increases occurred in Finland (9 points), Germany (8 points), and the United Kingdom (7 points).

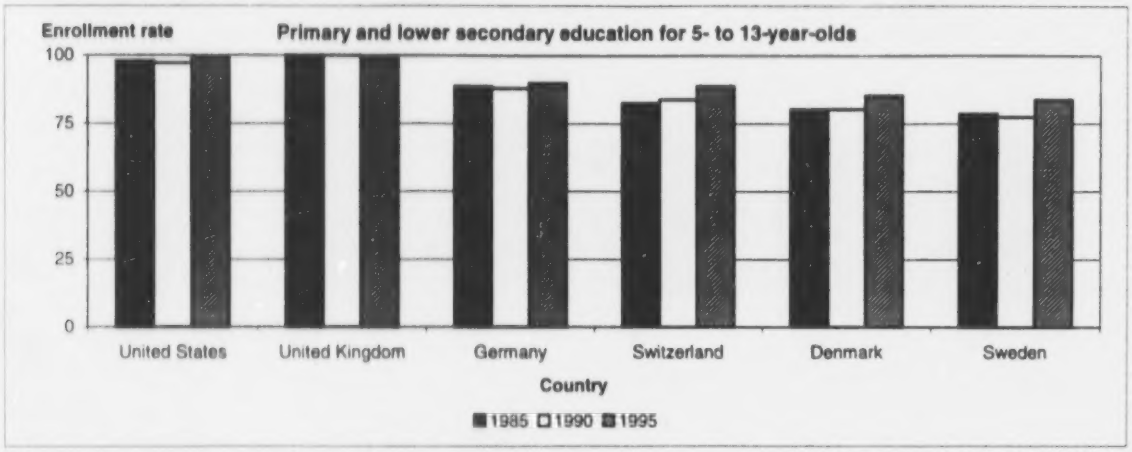
- Enrollment rates of 5- to 13-year-olds, considered the age of compulsory education in many countries, increased in most OECD countries reporting data between 1985 and 1995. The largest increases occurred in Switzerland, Denmark, and Sweden, with each country reporting a greater than 5 percentage points increase in enrollments in primary and lower secondary enrollment between 1985 and 1995. Enrollment rates for this age group increased slightly in the United States. Enrollment of 5- to 13-year-olds declined slightly in the United Kingdom and Norway.

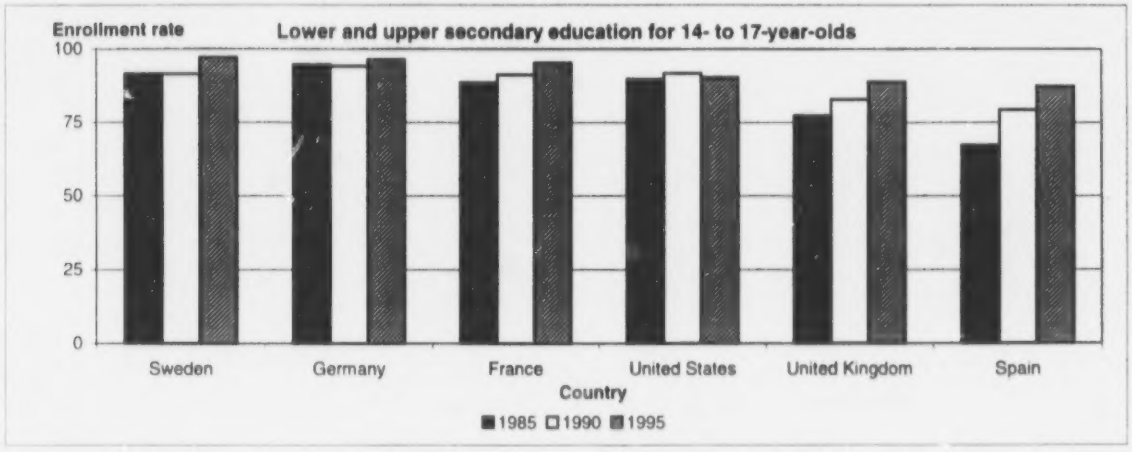
- Between 1985 and 1995, participation in lower and upper secondary education for 14- to 17-year-olds increased in every OECD country reporting data. By far, the largest increase occurred in Portugal, where enrollment rates for this age group increased 36 percentage points between 1985 and 1995. Other countries that had relatively low participation rates in the mid-1980s, like Turkey and Spain, also reported large increases. The United States observed the smallest increase in 14- to 17-year-olds enrollment. Among the G-7 countries reporting data, the United Kingdom had the largest increase in enrollment rates with an 11 percentage points change between 1985 and 1995. The U.S. enrollment rates were among the bottom half of countries reporting data in 1995, with 15 countries reporting higher rates and 11 countries reporting lower rates.

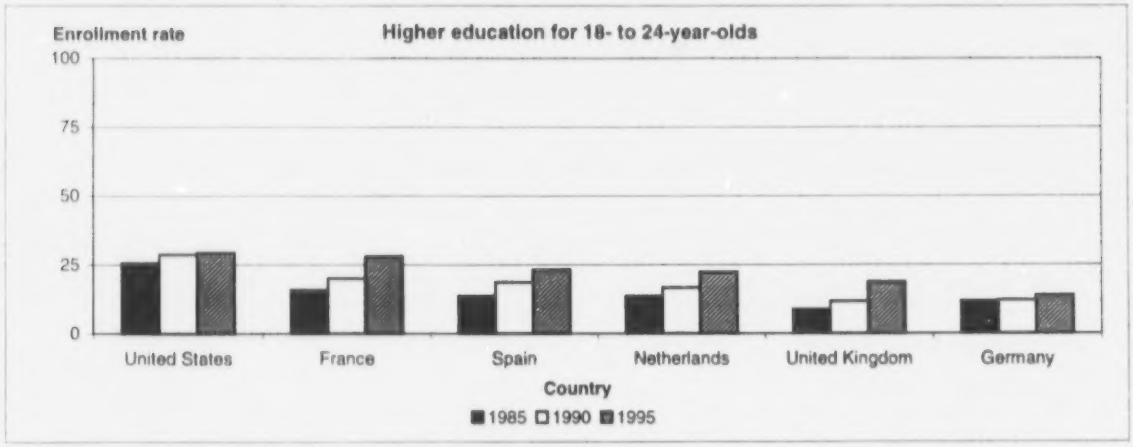
- All reporting OECD countries had increases in enrollment rates of 18- to 24-year-olds in higher education between 1985 and 1995. Belgium, France, and Portugal had the largest increases (of 12 percentage points or more). The United Kingdom also experienced a substantial increase of 10 percentage points. In contrast, the United States witnessed the smallest increase of all OECD countries at less than 4 percentage points. While the United States had by far the highest rate in 1985, by 1995 Belgium and Canada were higher than the United States and several other countries were nearly the same.

*Rates of participation and enrollment rates are used synonymously in this report.

Indicator 4.—Participation in formal education: 1985, 1990, and 1995







SOURCE: Organization for Economic Co-operation and Development (OECD), Education Database, 1998; U.S. Department of Commerce, Bureau of the Census, International Database, 1998.

Table 4-1.—Participation in all levels of education, ages 5–24: 1985–1995

Country	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1985–95 change[1]
Australia	—	—	—	—	—	—	66.4	70.0	68.0	66.8	69.8	—
Austria	—	—	—	—	—	—	—	—	60.0	61.4	63.5	—
Belgium	—	—	—	—	—	—	67.9	69.3	71.6	72.8	74.2	—
Canada	—	—	—	—	—	—	67.3	68.2	71.5	73.0	72.9	—
Czech Republic	—	—	—	—	—	—	—	—	—	62.6	63.0	—
Denmark	55.8	55.3	55.2	55.4	55.5	55.2	54.9	57.2	58.1	58.5	58.4	2.6
Finland	55.1	—	—	—	—	59.3	—	62.8	63.9	64.7	64.1	9.0
France	66.3	66.4	66.4	66.7	67.1	67.6	68.1	68.8	—	72.1	72.8	6.5
Germany[2]	55.9	54.6	54.1	53.8	52.6	54.0	—	—	58.1	61.9	63.4	7.5
Greece	—	—	—	—	—	—	—	—	53.4	53.2	53.3	—
Hungary	—	—	—	—	—	—	63.6	62.4	—	59.9	59.2	—
Iceland	—	—	—	—	—	—	—	—	—	62.0	—	—
Ireland	—	65.4	65.7	66.5	67.3	68.1	68.0	69.2	69.4	69.6	69.5	—
Italy	—	—	—	—	—	—	—	—	—	—	—	—
Japan	—	—	—	—	—	—	—	—	—	—	—	—
Korea	—	—	—	—	—	—	—	—	64.7	65.8	66.7	—
Luxembourg	—	51.3	51.5	52.2	52.0	—	—	—	—	—	—	—
Mexico	—	—	—	—	—	—	—	—	51.3	51.0	54.8	—
Netherlands	63.0	63.6	63.3	63.1	62.9	63.3	63.8	64.3	—	67.3	68.9	5.9
New Zealand	—	63.9	65.9	66.3	69.5	67.6	67.9	68.2	—	70.1	70.7	—
Norway	59.0	58.5	58.2	57.6	57.9	58.9	59.2	59.8	—	61.3	62.0	3.0
Poland	—	—	—	—	—	—	—	53.5	56.1	56.4	—	—
Portugal	—	—	—	—	—	—	56.6	—	56.0	61.7	62.9	—
Russia[3]	—	—	—	—	—	—	—	55.1	—	—	—	—
Spain	64.5	65.2	66.0	66.2	66.9	67.2	66.5	66.4	66.6	67.2	67.0	2.5
Sweden	55.8	55.1	54.8	54.7	54.5	54.2	54.1	57.8	59.0	60.0	60.8	5.0
Switzerland	53.8	53.1	52.7	52.6	53.1	54.2	54.9	57.8	58.6	59.6	60.4	6.6
Turkey	—	—	—	43.0	43.5	44.0	44.5	43.7	—	45.7	46.1	—
United Kingdom	60.9	61.2	60.8	61.0	61.2	61.8	62.7	63.7	64.7	66.5	68.0	7.1
United States	67.9	68.4	69.1	70.0	70.4	70.7	71.2	71.6	71.6	72.1	73.8	5.9
Average[4]	59.8	59.7	59.8	60.0	60.2	60.5	60.7	62.4	63.1	64.0	64.7	5.0

— No data were reported or data were incomplete or inconsistent.

[1]Percentage points change between 1985 and 1995.

[2]Pre-1991 numbers refer to Western Germany (Federal Republic of Germany before unification).

[3]Not an OECD member country.

[4]Average is for countries reporting data for all years included in the table.

NOTE: Countries in bold are G-7 countries. Enrollment data include full-time and part-time enrollments. Includes 5-year-olds enrolled in early childhood education.

SOURCE: Organization for Economic Co-operation and Development (OECD). Education Database, 1998; U.S. Department of Commerce, Bureau of the Census, International Database, 1998.

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Table 4-2.—Participation in primary and lower secondary education, ages 5–13: 1985–1995

Country	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1985–95 change[1]
Australia	—	96.3	100.6	96.6	97.2	—	96.7	96.5	96.2	96.1	97.5	—
Austria	90.6	—	—	—	92.9	—	—	—	93.5	93.7	94.2	3.6
Belgium	—	—	—	—	—	—	98.5	98.6	98.5	98.7	98.8	—
Canada	—	—	—	—	—	—	96.5	96.8	96.7	96.7	97.7	—
Czech Republic	—	—	—	—	—	—	—	103.7	—	96.3	96.3	—
Denmark	80.2	80.4	80.7	80.8	81.0	80.4	79.4	83.8	85.7	86.7	85.4	5.2
Finland	77.5	—	—	—	—	77.2		81.6	82.4	82.0	81.4	3.9
France	98.5	98.4	98.3	98.1	98.0	98.1	98.1	98.1	—	100.2	100.2	1.7
Germany[2]	88.6	87.7	88.4	88.8	88.6	88.0	—	—	86.4	90.2	89.9	1.3
Greece	—	—	—	—	—	—	—	—	67.8	67.2	69.0	—
Hungary	—	—	—	—	—	—	—	—	—	93.2	92.7	—
Iceland	—	—	—	—	—	—	—	—	—	87.4	—	—
Ireland	—	93.6	93.2	93.5	93.6	94.0	94.1	94.3	94.2	94.5	94.5	—
Italy	—	—	—	—	—	—	—	—	—	—	—	—
Japan	—	—	—	—	—	99.8	99.8	99.9	—	—	103.3	—
Korea	—	—	—	—	—	—	—	—	91.2	91.2	90.1	—
Luxembourg	—	90.0	89.9	91.1	89.8	—	—	—	—	—	—	—
Mexico	—	—	—	—	—	—	—	—	89.8	91.1	91.8	—
Netherlands	96.6	99.5	99.5	99.9	99.9	99.8	99.8	96.6	—	99.0	99.2	2.6
New Zealand	—	101.1	102.0	102.2	103.1	104.1	103.9	103.3	—	103.0	104.1	—
Norway	84.1	84.1	84.0	84.0	83.9	84.2	84.2	84.4	—	83.9	83.8	-0.3
Poland	—	—	—	—	—	—	—	76.6	81.6	81.8	—	—
Portugal	84.2	85.7	85.3	88.1	—	85.4	92.6	—	89.1	—	—	—
Russia[3]	—	—	—	—	—	—	—	76.5	—	—	—	—
Spain	103.1	103.6	105.1	104.3	105.0	105.2	103.2	102.8	103.9	104.5	104.5	1.4
Sweden	78.7	78.4	78.1	78.2	77.8	77.4	76.7	83.4	83.8	83.8	83.8	5.1
Switzerland	82.6	82.1	81.8	81.8	82.5	83.9	84.5	89.2	89.0	88.8	88.7	6.1
Turkey	69.7	70.6	70.9	72.5	72.7	73.4	73.8	68.2	—	73.0	73.0	3.3
United Kingdom	105.1	104.8	103.5	103.2	102.3	102.0	101.7	98.3	98.6	98.8	98.7	-6.4
United States	98.0	97.6	97.2	97.8	97.4	97.2	97.0	96.6	95.6	96.1	99.4	1.4
Average[4]	91.3	91.1	91.1	91.0	91.0	91.0	90.4	92.3	92.8	93.1	93.4	2.1

— No data were reported or data were incomplete or inconsistent.
[1]Percentage points change between 1985 and 1995.
[2]Pre-1991 numbers refer to Western Germany (Federal Republic of Germany before unification).
[3]Not an OECD member country.
[4]Average is for countries reporting data for all years included in the table.
NOTE: Countries in bold are G-7 countries. Enrollment data include full-time and part-time enrollments. Includes 5-year-olds enrolled in early childhood education. See supplemental notes and tables for an explanation of why rates in some countries exceed 100.
SOURCE: Organization for Economic Co-operation and Development (OECD). Education Database, 1998; U.S. Department of Commerce, Bureau of the Census, International Database, 1998.

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Table 4-3.—Participation in lower and upper secondary education, ages 14–17: 1985–1995

Country	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1985–95 change[1]
Australia	—	—	—	—	—	—	83.2	81.2	91.0	91.7	93.4	—
Austria	85.5	—	—	—	12.1	—	—	—	91.8	93.1	94.4	8.9
Belgium	91.4	92.6	93.0	92.3	—	—	94.3	98.2	101.5	101.6	101.1	9.7
Canada	—	—	—	—	—	—	86.7	87.6	90.3	89.7	89.1	—
Czech Republic	—	—	—	—	—	—	—	81.1	—	88.4	93.9	—
Denmark	89.7	90.1	90.6	91.0	90.8	90.3	90.0	90.6	90.5	91.5	92.8	3.1
Finland	89.8	—	—	—	—	98.0	—	95.1	94.7	96.5	95.2	5.4
France	88.5	88.8	88.4	89.7	90.8	91.2	91.5	91.8	—	95.3	95.3	6.8
Germany[2]	94.5	94.8	95.7	96.3	88.5	94.1	—	—	91.6	95.9	96.4	1.9
Greece	—	—	—	—	—	—	—	77.6	76.5	76.2	77.8	—
Hungary	—	—	—	—	—	—	77.7	77.7	—	88.0	89.0	—
Iceland	—	—	—	—	—	—	—	—	—	89.9	89.4	—
Ireland	—	81.5	83.7	84.9	86.4	87.4	86.8	88.1	91.7	90.3	89.7	—
Italy	60.9	—	—	—	—	—	—	—	—	—	—	—
Japan	—	—	—	—	—	97.3	99.1	100.0	—	100.8	101.2	—
Korea	—	—	—	—	—	—	—	—	89.5	92.2	96.0	—
Luxembourg	—	80.3	81.6	80.6	79.3	—	—	—	—	—	80.4	—
Mexico	—	—	—	—	—	—	—	—	39.9	37.6	43.3	—
Netherlands	92.2	91.5	91.6	91.5	91.3	91.8	92.0	96.8	—	95.8	96.6	4.4
New Zealand	—	73.5	77.0	78.5	81.4	82.9	85.9	88.0	—	93.8	94.9	—
Norway	90.0	90.5	90.3	89.9	91.3	93.2	93.7	94.3	—	95.6	96.1	6.1
Poland	—	—	—	—	—	—	—	61.6	63.4	64.3	—	—
Portugal	40.0	43.6	41.4	54.5	—	—	63.8	—	66.5	75.0	76.3	36.3
Russia[3]	—	—	—	—	—	—	—	56.7	—	—	—	—
Spain	67.2	69.6	71.7	75.1	77.5	79.3	80.2	82.0	84.4	85.8	87.3	20.1
Sweden	91.4	92.5	92.5	92.3	91.9	91.4	91.3	93.0	95.5	96.6	97.1	5.7
Switzerland	88.0	88.1	88.1	88.3	88.3	88.8	88.9	90.1	90.2	90.5	90.7	2.7
Turkey	27.7	28.3	30.2	31.4	32.5	32.9	34.3	43.5	—	39.8	42.9	15.2
United Kingdom	77.3	78.2	79.5	80.4	82.0	82.8	83.6	91.8	87.5	88.6	88.7	11.4
United States	89.7	90.9	91.6	90.8	92.5	91.7	90.8	88.5	92.4	91.3	90.3	0.6
Average[4]	83.9	84.9	85.7	86.3	87.2	87.4	87.5	89.3	90.1	90.7	91.1	7.3

— No data were reported or data were incomplete or inconsistent.

[1]Percentage points change between 1985 and 1995.

[2]Pre-1991 numbers refer to Western Germany (Federal Republic of Germany before unification).

[3]Not an OECD member country.

[4]Average is for countries reporting data for all years included in the table.

NOTE: Countries in bold are G-7 countries. Enrollment data include full-time and part-time enrollments. See supplemental notes and tables for an explanation of why rates in some countries exceed 100.

SOURCE: Organization for Economic Co-operation and Development (OECD), Education Database, 1998; U.S. Department of Commerce, Bureau of the Census, International Database, 1998.

Table 4-4.—Participation in higher education, ages 18–24: 1985–1995

Country	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1985–95 change[1]
Australia	—	—	—	—	—	—	22.2	33.3	22.9	18.9	23.9	—
Austria	—	—	—	—	—	—	—	14.5	12.3	12.9	14.7	—
Belgium	17.6	18.0	18.8	19.2	—	—	21.9	22.7	26.5	28.3	31.0	13.4
Canada	—	—	—	—	—	—	21.9	22.6	29.9	34.0	32.2	—
Czech Republic	—	—	—	—	—	—	—	10.0	—	12.4	13.3	—
Denmark	11.3	11.3	11.4	11.9	12.2	12.7	13.3	14.4	14.9	15.1	15.4	4.1
Finland	13.3	—	—	—	—	17.6	—	19.6	21.1	22.3	22.6	9.3
France	15.9	16.4	16.8	17.4	18.5	20.0	21.6	23.7	—	27.3	28.1	12.2
Germany[2]	11.9	11.7	11.4	11.3	11.7	12.2	—	—	13.3	13.2	13.9	2.0
Greece	—	—	—	—	—	—	—	15.2	24.9	25.7	23.7	—
Hungary	—	—	—	—	—	—	8.4	8.6	—	9.8	10.6	—
Iceland	—	—	—	—	—	—	—	—	—	13.1	13.8	—
Ireland	—	11.4	11.7	12.2	13.5	14.5	15.2	19.7	19.5	21.4	21.3	—
Italy	—	—	—	—	—	—	—	—	—	—	—	—
Japan	—	—	—	—	—	—	—	—	—	—	—	—
Korea	—	—	—	—	—	—	—	—	23.7	25.7	27.4	—
Luxembourg	—	2.1	2.3	2.6	2.6	—	—	—	—	—	—	—
Mexico	—	—	—	—	—	—	—	—	0.6	0.6	7.3	—
Netherlands	13.7	13.9	14.2	14.9	15.6	16.7	18.0	19.2	—	21.4	22.3	8.6
New Zealand	—	12.8	15.6	16.2	19.0	16.7	18.1	19.9	—	22.6	21.1	—
Norway	11.3	11.1	12.2	12.5	13.8	15.8	17.1	18.3	—	21.0	21.2	9.9
Poland	—	—	—	—	—	—	—	11.1	12.3	14.2	—	—
Portugal	6.0	5.1	6.3	—	—	—	11.0	—	16.0	17.6	17.7	11.7
Russia[3]	—	—	—	—	—	—	—	21.3	—	—	—	—
Spain	13.7	14.8	15.4	16.5	17.6	18.7	19.2	20.2	20.4	22.6	23.2	9.5
Sweden	9.5	9.4	9.7	9.8	10.0	10.2	10.8	11.9	12.9	14.1	15.1	5.6
Switzerland	8.0	8.0	8.3	8.4	8.7	9.3	9.7	10.3	10.7	11.1	11.4	3.4
Turkey	—	—	—	4.6	5.5	6.2	6.7	7.1	—	9.3	9.3	—
United Kingdom	8.7	10.4	10.6	10.8	11.0	11.7	12.7	13.2	15.4	17.2	18.8	10.1
United States	25.5	25.5	26.3	27.8	28.2	28.8	29.3	31.1	29.4	29.4	29.4	3.9
Average[4]	12.8	13.2	13.6	14.2	14.6	15.2	15.8	16.8	17.3	18.3	18.9	6.1

— No data were reported or data were incomplete or inconsistent.

[1]Percentage points change between 1985 and 1995.

[2]Pre-1991 numbers refer to Western Germany (Federal Republic of Germany before unification).

[3]Not an OECD member country.

[4]Average is for countries reporting data for all years included in the table.

NOTE: Countries in bold are G-7 countries. Enrollment data include full-time and part-time enrollments.

SOURCE: Organization for Economic Co-operation and Development (OECD), Education Database, 1998, U.S. Department of Commerce, Bureau of the Census, International Database, 1998.

Indicator 5: Private school enrollment

In most countries, private schools either offer an alternative to public schools or provide the only schooling available at certain levels. Many factors can influence the proportion of students in private schools, including tuition rates, family income, the relative value placed on education, the availability of public schooling, and satisfaction with public schools. Differences in private school enrollments across countries and over time may indicate differences or changes in any of these factors. Private schools vary in their administrative structure from country to country. In the United States, private schools are privately managed and funded. In contrast, in France and Belgium private schools are managed by private organizations but are predominantly or entirely funded by government agencies.

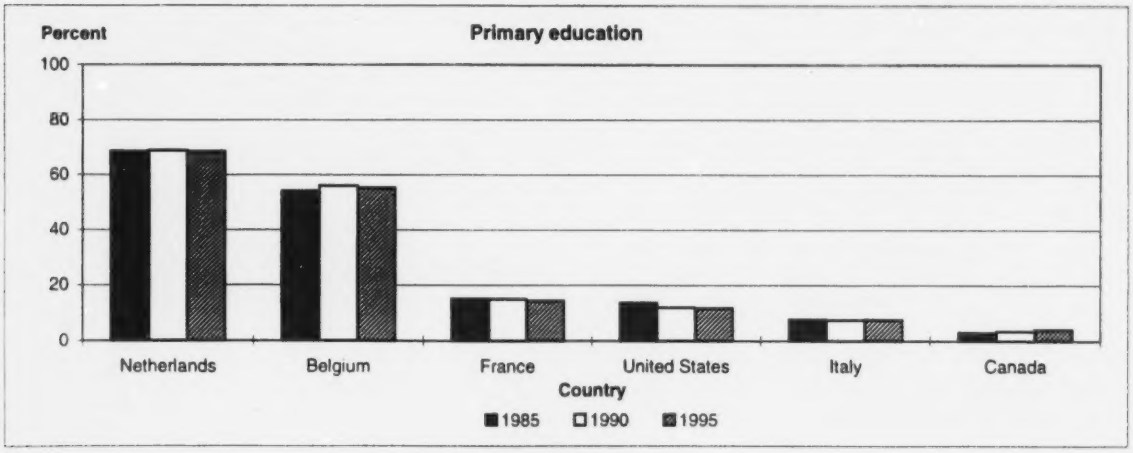
- In most OECD countries, less than 20 percent of students are enrolled in private institutions across all levels of education. However, there is great variation in private school enrollment across countries, as well as within countries over time. In New Zealand, the rate of private school enrollment rose from 2 to 8 percent between 1985 and 1995. In contrast, both Canada and the United States experienced slight declines in the proportion of students enrolled in private schools. The Netherlands consistently had the highest percentage of students enrolled in private institutions (around 70 percent) between 1985 and 1995, followed by Belgium (over 50 percent). In contrast, Turkey had the lowest private school enrollment, at less than 2 percent.

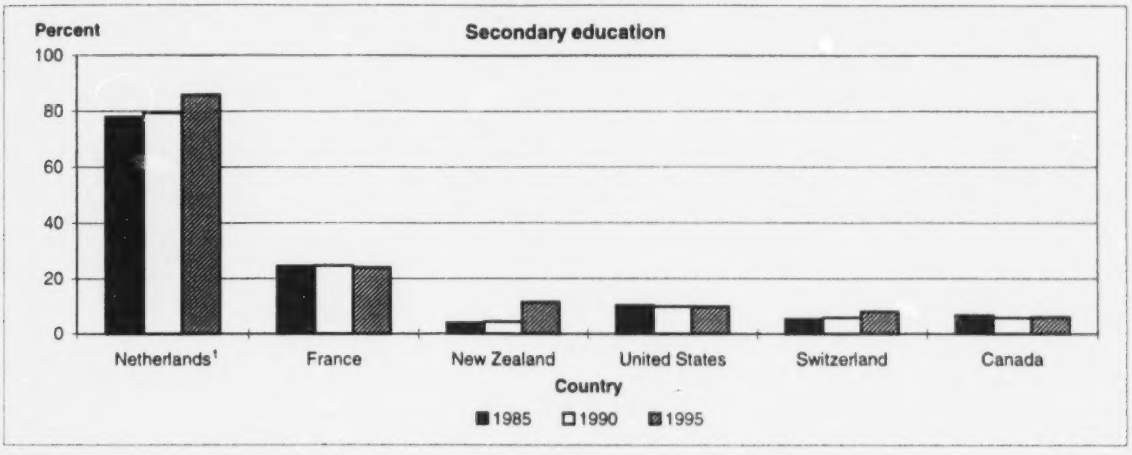
- Enrollment in private schools at the primary level increased in the majority of OECD countries between 1985 and 1995. The Netherlands consistently enrolled nearly 70 percent of its primary students in private institutions. Three other countries, Belgium, Spain, and Australia, consistently enrolled over a quarter of their primary students in private institutions. The United States experienced a slight decrease in its percentage of primary students enrolled in private schools from 14 to 12 percent.

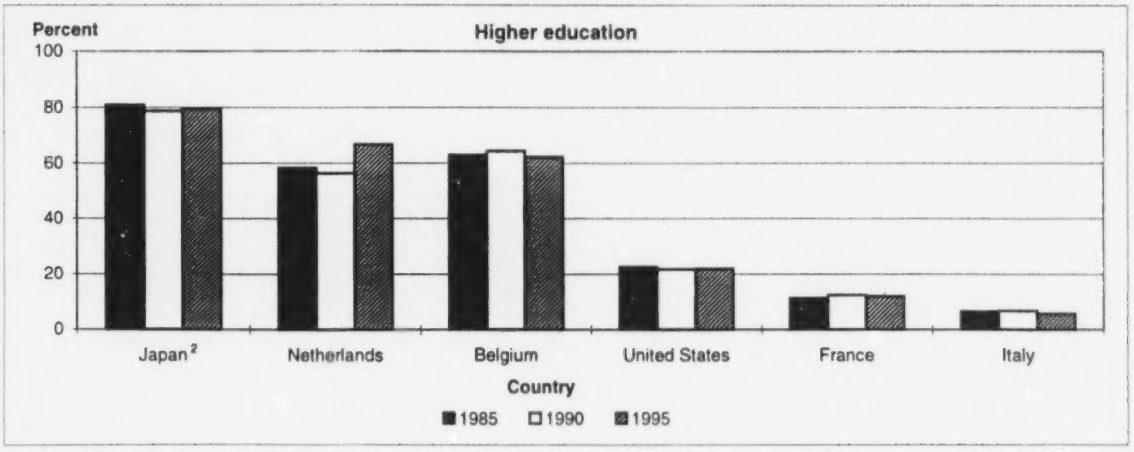
- The patterns and proportions of private school enrollments observed at the secondary level were quite similar to those observed at the primary level. New Zealand almost tripled its private secondary school enrollment between 1985 and 1995. The Netherlands and Denmark also experienced large increases. In contrast, Spain witnessed a decrease of 8 percentage points. The Netherlands, Belgium, and Spain continued to lead in terms of private school enrollment, although, at the secondary level, France replaced Australia, among countries with time series data, as the fourth country with the highest percentage of private school enrollment. Private secondary school enrollment in the United States remained fairly stable between 1985 and 1995, at around 10 percent.

- Patterns of private school enrollment in higher education differed from those at the primary and secondary levels both within and among countries. Private enrollment in higher education grew in the Netherlands, Ireland, and Finland, but dropped in Norway. Higher education private school enrollment remained stable in the United States. Japan consistently had the highest enrollment proportion in private higher education institutions between 1985 and 1995.

Indicator 5.—Percent of students in private schools: 1985, 1990, and 1995







[1]Data are from 1985, 1991, and 1995.
[2]Data are from 1986, 1990, and 1995.
SOURCE: Organization for Economic Co-operation and Development (OECD), Education Database, 1998.

Table 5-1.—Percentage of students enrolled in private schools, all levels of education: 1985–1995

Country	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1985–95 change[1]
Australia	—	18.5	18.6	18.7	18.9	—	—	—	18.3	18.6	18.1	—
Austria	9.6	9.8	9.0	9.0	8.7	9.0	9.1	8.9	8.9	8.9	9.0	-0.6
Belgium	—	—	—	—	57.9	58.1	58.5	58.8	59.0	58.9	59.0	—
Canada[2]	6.2	6.4	6.6	6.8	7.0	7.3	7.6	7.6	4.1	4.1	4.2	-2.0
Czech Republic	—	—	—	—	—	—	0.1	0.4	—	2.9	4.3	—
Denmark	6.5	6.7	6.9	7.1	7.3	6.8	6.8	6.6	6.9	6.7	7.9	1.4
Finland	—	—	3.3	3.3	3.5	3.6	3.8	4.1	4.0	4.1	4.2	—
France	18.5	18.5	18.4	18.4	18.5	18.4	18.3	18.2	—	17.6	17.7	-0.8
Germany[3]	—	—	—	—	13.6	13.9	—	—	12.5	11.7	12.5	—
Greece	—	—	—	—	—	—	—	5.9	5.2	5.1	4.6	—
Hungary	—	—	—	—	—	—	0.1	1.1	—	2.6	3.2	—
Iceland	—	—	—	—	—	—	—	—	—	—	4.1	—
Ireland[4]	—	—	—	—	78.3	77.7	76.6	1.2	1.4	1.6	1.7	—
Italy	10.9	10.8	10.7	10.5	10.1	10.5	9.5	9.6	—	9.5	9.5	-1.4
Japan	—	63.5	63.5	62.5	23.8	24.7	25.6	26.3	—	—	23.8	—
Korea	—	—	—	—	—	—	—	—	33.4	33.9	33.4	—
Luxembourg	—	—	—	4.5	4.3	—	—	—	—	—	—	—
Mexico	—	—	—	—	—	—	—	—	10.0	9.8	9.7	—
Netherlands	71.8	71.7	71.3	70.0	70.8	63.7	71.5	73.8	—	74.7	75.6	3.8
New Zealand	2.4	1.6	2.6	2.7	2.6	2.6	2.4	4.2	—	6.4	7.7	5.3
Norway	7.5	7.4	8.7	8.7	9.3	9.4	9.9	10.2	—	10.0	10.2	2.7
Poland	—	—	—	—	—	—	—	—	0.9	1.4	—	—
Portugal	—	—	—	10.1	—	—	14.1	—	15.6	15.8	16.6	—
Russia[5]	—	—	—	—	—	—	—	—	—	0.5	1.2	—
Spain	33.6	32.7	32.1	31.0	30.8	30.3	30.0	29.4	28.4	27.3	27.9	-5.7
Sweden	—	—	—	—	1.0	1.0	1.0	1.1	1.4	2.4	3.4	—
Switzerland	—	—	—	5.3	5.3	5.4	5.3	8.2	8.1	8.0	8.0	—
Turkey	0.8	0.9	1.0	1.2	1.3	1.4	1.4	1.4	1.4	1.4	1.4	0.6
United Kingdom[6]	4.9	5.0	5.1	5.2	4.9	4.9	4.9	14.3	14.3	34.7	35.6	30.7
United States	16.5	16.4	16.3	16.2	15.9	16.2	16.0	15.0	13.9	13.7	16.1	-0.4
Average[7]	11.1	11.1	11.0	10.9	10.9	10.8	10.8	11.9	11.1	13.9	14.6	3.4

— No data were reported or data were incomplete or inconsistent.

[1]Percentage points change between 1985 and 1995.

[2]Post 1992 data exclude enrollment in private training schools at the tertiary level.

[3]Pre-1991 numbers refer to Western Germany (Federal Republic of Germany before unification).

[4]In 1992 there was a change in definition of private education. Although most schools in Ireland are still privately owned, because they depend almost exclusively on the government for funding and administration, for the purpose of international comparisons they were reclassified as public schools.

[5]Not an OECD member country.

[6]1992 and beyond includes pupils in infant classes in primary school enrollment.

[7]Average is for countries reporting data for all years included in the table.

NOTE: Countries in bold are G-7 countries. Enrollment data include full-time and part-time enrollments.

SOURCE: Organization for Economic Co-operation and Development (OECD), Education Database, 1998.

Table 5-2.—Percentage of primary students enrolled in private schools: 1985–1995

Country	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1985-95 change[1]
Australia	23.6	24.1	24.4	24.7	24.8	—	25.1	25.1	25.1	25.5	25.8	2.2
Austria	3.8	3.9	3.8	3.8	3.8	3.9	4.0	4.0	4.3	4.3	4.3	0.5
Belgium	54.1	54.7	55.2	55.9	55.8	56.1	56.1	56.0	55.8	55.6	55.3	1.2
Canada	3.0	3.2	3.3	3.5	3.5	3.6	3.7	3.8	3.9	4.1	4.2	1.2
Czech Republic	—	—	—	—	—	—	0.1	0.2	—	0.4	0.6	—
Denmark	8.5	9.0	9.3	9.8	10.1	9.3	9.3	9.0	11.0	11.0	10.7	2.2
Finland	0.6	0.6	0.6	0.6	0.9	0.9	0.9	0.9	0.0	0.0	0.9	0.3
France	15.2	15.2	15.2	15.1	15.0	15.0	14.9	14.9	—	14.5	14.4	-0.8
Germany[2]	1.5	1.6	1.6	1.7	1.7	1.8	—	—	1.8	1.8	1.9	0.4
Greece	—	—	—	—	—	—	—	7.2	6.2	6.2	6.0	—
Hungary	—	—	—	—	—	—	—	0.8	—	2.2	2.6	—
Iceland	—	—	—	—	—	—	—	—	—	1.9	1.7	—
Ireland[3]	99.7	99.7	99.7	99.7	99.7	99.7	99.7	1.5	1.5	1.5	1.6	-98.1
Italy	7.7	7.7	7.7	7.8	7.4	7.5	7.1	7.4	—	7.6	7.6	-0.1
Japan	—	0.5	0.6	0.6	0.6	0.7	0.8	0.7	—	0.8	0.8	—
Korea	—	—	—	—	—	—	—	—	1.7	1.7	1.8	—
Luxembourg	—	—	—	0.9	0.8	—	—	—	—	—	—	—
Mexico	—	—	—	—	—	—	—	—	6.4	6.4	6.3	—
Netherlands	68.6	68.7	68.9	65.9	69.0	69.0	69.0	68.9	—	68.7	68.6	0.0
New Zealand	2.0	2.1	2.2	2.3	2.5	2.5	2.5	2.5	—	2.5	2.5	0.5
Norway	0.7	1.0	0.9	1.0	1.1	1.1	1.2	1.2	—	1.3	1.4	0.7
Poland	—	—	—	—	—	—	—	0.2	0.3	0.5	—	—
Portugal	6.6	7.2	7.1	6.3	—	6.5	7.5	—	—	—	8.1	1.5
Russia[4]	—	—	—	—	—	—	—	—	—	—	0.5	—
Spain	34.6	34.2	34.6	33.6	34.2	34.5	34.9	35.5	35.5	35.0	34.8	0.2
Sweden	0.7	0.7	0.7	0.7	0.8	0.9	0.9	0.9	1.1	1.6	2.0	1.3
Switzerland	2.2	2.3	2.3	2.4	2.4	2.4	2.4	3.3	3.3	3.2	3.2	1.0
Turkey	0.3	0.4	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.7	0.8	0.5
United Kingdom[5]	4.5	4.5	4.6	4.7	4.8	4.8	4.8	6.1	5.2	5.1	5.1	0.6
United States	13.6	13.2	12.7	12.7	11.9	12.0	10.5	10.3	10.5	9.8	11.8	-1.8
Average[6]	18.8	18.9	18.9	19.0	19.0	19.1	19.0	11.0	11.1	11.0	11.2	-7.6

— No data were reported or data were incomplete or inconsistent.

[1]Percentage points change between 1985 and 1995.

[2]Pre-1991 numbers refer to Western Germany (Federal Republic of Germany before unification).

[3]In 1992 there was a change in definition of private education. Although most schools in Ireland are still privately owned, because they depend almost exclusively on the government for funding and administration, for the purpose of international comparisons they were reclassified as public schools.

[4]Not an OECD member country.

[5]1992 and beyond includes pupils in infant classes in primary school enrollment.

[6]Average is for countries reporting data for all years included in the table.

NOTE: Countries in bold are G-7 countries. Enrollment data include full-time and part-time enrollments.

SOURCE: Organization for Economic Co-operation and Development (OECD), Education Database, 1998.

Table 5-3.—Percentage of secondary students enrolled in private schools: 1985–1995

Country	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1985–95 change[1]
Australia	—	20.9	21.0	21.2	21.5	—	—	28.9	20.4	20.9	19.7	—
Austria	9.9	10.2	8.8	8.9	8.5	9.2	9.4	9.2	8.6	8.6	8.7	-1.2
Belgium	—	—	—	—	62.6	63.4	64.2	66.3	61.5	61.6	61.4	—
Canada	6.8	6.5	6.1	5.8	5.8	5.8	5.8	5.9	5.9	5.9	6.1	-0.7
Czech Republic	—	—	—	—	—	—	0.0	0.5	—	4.3	6.3	—
Denmark	6.3	6.5	6.7	6.8	7.1	7.0	7.0	6.8	7.9	7.7	11.1	4.8
Finland	—	—	5.7	5.7	5.6	5.9	6.2	6.2	—	—	6.4	—
France	24.5	24.5	24.5	24.6	24.9	24.8	24.5	24.3	—	23.8	24.1	-0.4
Germany[2]	5.7	5.9	6.0	6.2	6.4	6.6	—	—	5.7	5.7	5.8	0.1
Greece	—	—	—	—	—	—	—	6.0	6.2	6.3	5.2	—
Hungary	—	—	—	—	—	—	—	0.9	—	2.5	3.2	—
Iceland	—	—	—	—	—	—	—	—	—	—	—	—
Ireland[3]	—	—	—	—	—	—	—	0.4	0.4	0.5	0.5	—
Italy	7.4	7.2	7.1	7.1	6.7	7.8	6.1	6.2	—	5.9	5.3	-2.1
Japan	—	—	15.4	15.8	16.4	17.1	17.6	17.9	—	18.3	18.6	—
Korea	—	—	—	—	—	—	—	—	43.5	41.2	41.4	—
Luxembourg	—	9.8	10.1	9.8	9.5	—	—	—	—	—	—	—
Mexico	—	—	—	—	—	—	—	—	13.4	15.2	14.7	—
Netherlands	77.9	77.8	77.6	77.2	76.8	—	79.3	83.8	—	81.9	85.8	7.9
New Zealand	3.9	4.1	4.2	4.3	4.3	4.4	4.3	4.1	—	8.6	11.6	7.7
Norway	4.2	4.3	4.1	4.3	5.1	5.3	5.4	5.3	—	5.2	5.7	1.5
Poland	—	—	—	—	—	—	—	0.9	1.3	1.8	—	—
Portugal	10.8	8.8	7.5	6.3	—	—	10.6	—	—	—	10.4	-0.4
Russia[4]	—	—	—	—	—	—	—	0.0	—	—	0.0	—
Spain	36.1	35.1	33.9	32.5	32.2	31.1	30.5	29.6	28.4	27.3	27.8	-8.3
Sweden	0.9	1.0	1.1	1.0	1.1	1.1	1.2	1.7	—	1.2	1.3	0.4
Switzerland	5.4	5.4	5.6	5.7	5.9	5.9	5.8	8.4	8.4	8.1	8.1	2.7
Turkey	1.8	2.0	2.2	2.5	2.6	2.7	2.8	2.7	2.6	2.5	2.4	0.6
United Kingdom	—	—	—	—	—	—	—	8.3	—	—	—	—
United States	10.2	10.1	10.0	9.9	9.7	9.8	9.4	8.1	8.0	7.8	9.9	-0.3
Average[5]	10.9	10.8	10.5	10.3	10.3	10.2	10.1	10.1	10.0	9.7	10.6	-0.3

— No data were reported or data were incomplete or inconsistent.

[1]Percentage points change between 1985 and 1995.

[2]Pre-1991 numbers refer to Western Germany (Federal Republic of Germany before unification).

[3]In 1992 there was a change in definition of private education. Although most schools in Ireland are still privately owned, because they depend almost exclusively on the government for funding and administration, for the purpose of international comparisons they were reclassified as public schools.

[4]Not an OECD member country.

[5]Average is for countries reporting data for all years included in the table.

NOTE: Countries in bold are G-7 countries. Enrollment data include full-time and part-time enrollments.

SOURCE: Organization for Economic Co-operation and Development (OECD), Education Database, 1998.

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Table 5-4.—Percentage of higher education students enrolled in private schools: 1985–1995

Country	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1985–95 change[1]
Australia	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Austria	2.8	2.6	2.4	2.4	2.3	2.2	2.2	2.4	2.2	2.2	2.4	-0.4
Belgium	62.9	63.3	64.0	64.1	64.6	64.4	64.2	63.3	61.0	59.9	62.3	-0.6
Canada[2]	10.2	11.2	12.3	13.1	13.9	14.8	15.2	14.9	1.6	1.6	1.3	-8.9
Czech Republic	—	—	—	—	—	—	0.0	1.0	—	5.4	6.6	—
Denmark	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Finland	2.7	2.7	2.7	2.9	3.3	3.4	3.4	3.4	—	—	4.5	1.8
France	11.3	11.7	12.0	12.2	12.5	12.3	13.0	13.3	—	12.4	12.0	0.7
Germany[3]	5.8	5.9	5.5	5.4	5.8	4.8	—	—	4.7	4.9	5.4	-0.4
Greece	—	—	—	—	—	—	—	0.0	0.0	0.0	0.0	—
Hungary	—	-	—	—	—	—	1.2	1.6	—	6.1	7.2	—
Iceland	—	—	—	—	—	—	—	—	—	—	—	—
Ireland[4]	2.3	2.7	2.6	2.8	2.7	—	2.0	2.2	4.4	5.0	5.7	3.4
Italy	6.4	6.6	6.9	6.7	6.9	6.6	6.0	6.0	—	5.6	5.7	-0.7
Japan	—	80.9	78.3	78.6	78.5	78.8	79.1	79.5	—	80.0	79.7	—
Korea	—	—	—	—	—	—	—	—	70.3	70.5	71.2	—
Luxembourg	—	0.0	0.0	0.0	0.0	—	—	—	—	—	—	—
Mexico	—	—	—	—	—	—	—	—	21.2	21.5	22.5	—
Netherlands	58.3	58.6	55.9	56.3	56.4	56.3	56.3	55.7	—	62.2	66.7	8.4
New Zealand	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Norway	17.7	13.0	23.1	20.4	19.3	17.5	16.5	16.4	—	12.7	10.3	-7.4
Poland	—	—	—	—	—	—	—	—	3.6	6.7	—	—
Portugal	13.4	14.2	23.4	19.3	21.3	—	28.0	—	—	—	—	—
Russia[5]	—	—	—	—	—	—	—	0.0	—	—	2.4	—
Spain	9.1	9.3	9.4	9.5	8.7	8.8	8.7	9.1	9.0	9.3	—	—
Sweden	—	—	—	—	1.5	1.5	1.4	1.3	—	1.2	—	—
Switzerland	—	—	—	7.1	6.6	7.5	7.4	19.6	19.0	19.6	19.8	—
Turkey	0.0	0.0	0.1	0.3	0.6	0.7	0.8	0.9	0.9	0.8	0.8	0.8
United Kingdom	—	—	—	—	—	—	—	—	—	—	—	—
United States	22.6	22.6	22.3	21.9	22.2	21.9	21.7	21.2	21.4	21.8	22.0	-0.6
Average[6]	12.3	12.5	12.6	12.7	12.9	13.0	13.0	12.8	10.9	10.8	11.1	-1.2

— No data were reported or data were incomplete or inconsistent.

[1]Percentage points change between 1985 and 1995.

[2]Post 1992 data exclude enrollment in private training schools at the tertiary level.

[3]Pre-1991 numbers refer to Western Germany (Federal Republic of Germany before unification).

[4]In 1992 there was a change in definition of private education. Although most schools in Ireland are still privately owned, because they depend almost exclusively on the government for funding and administration, for the purpose of international comparisons they were reclassified as public schools.

[5]Not an OECD member country.

[6]Average is for countries reporting data for all years included in the table.

NOTE: Countries in bold are G7 countries. Enrollment data include full-time and part-time enrollments.

SOURCE: Organization for Economic Co-operation and Development (OECD), Education Database, 1998.

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Indicator 6: Enrollment rates in upper secondary education

In the United States, upper secondary education is the equivalent of grades 10 through 12 (the last three years of high school). In most countries, upper secondary education can include an academic or a vocational-technical curriculum. For most countries, compulsory education ends before the last year of secondary education (12th grade in the United States).* Examining enrollment rates at this level shows what percentage of students at a particular age are still in school before receiving the U.S. equivalent of a high school diploma. However, enrollment rates will vary greatly by country because in some countries 16-year-olds will still be enrolled in lower secondary education while in other countries 18- and 19-year-olds will already be enrolled in higher education. Overall, participation rates in upper secondary programs are an indication of the value placed on education, the economic need for skilled workers, and the availability of diverse institutions to meet all students' needs.

- Enrollment rates in upper secondary education generally increased from 1985 and 1995, at all ages between 16 and 19. Several countries, including Portugal, Spain, Turkey, and the United Kingdom showed marked increases in upper secondary enrollment rates at all age levels during this period.

- Upper secondary enrollment at age 16 increased in the majority of OECD countries between 1985 and 1995, with the exception of Germany, Denmark, Switzerland, and the United States. By far the largest increase occurred in Portugal, where enrollment almost tripled. Spain, Turkey, and the United Kingdom also experienced rises in 16-year-old enrollment. Among G-7 countries with available data, the United Kingdom experienced the largest increase.

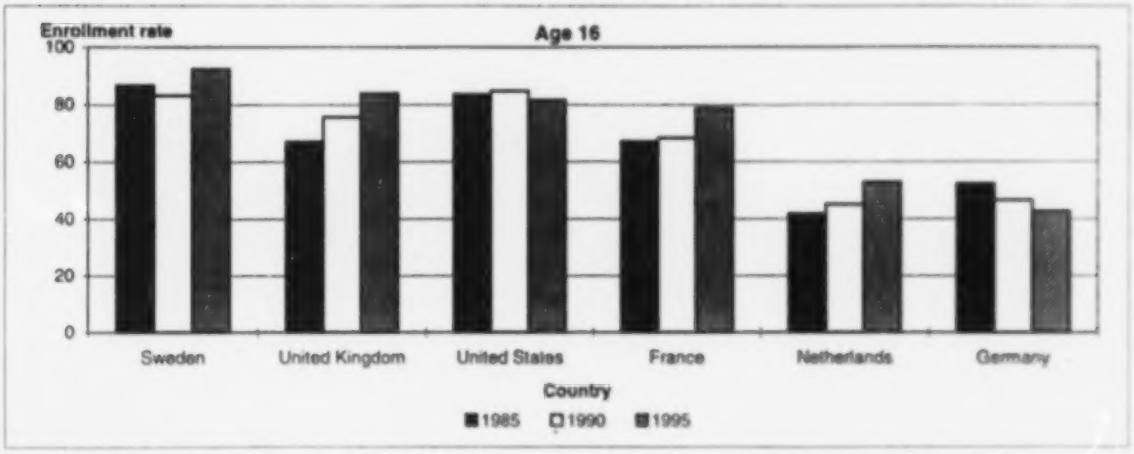
- The pattern for upper secondary enrollment at age 17 is quite similar to the one observed for age 16: the majority of OECD countries experienced an increase between 1985 and 1995, but the United States, Germany, and Switzerland had a slight decrease. The largest increases occurred in Portugal and Spain.

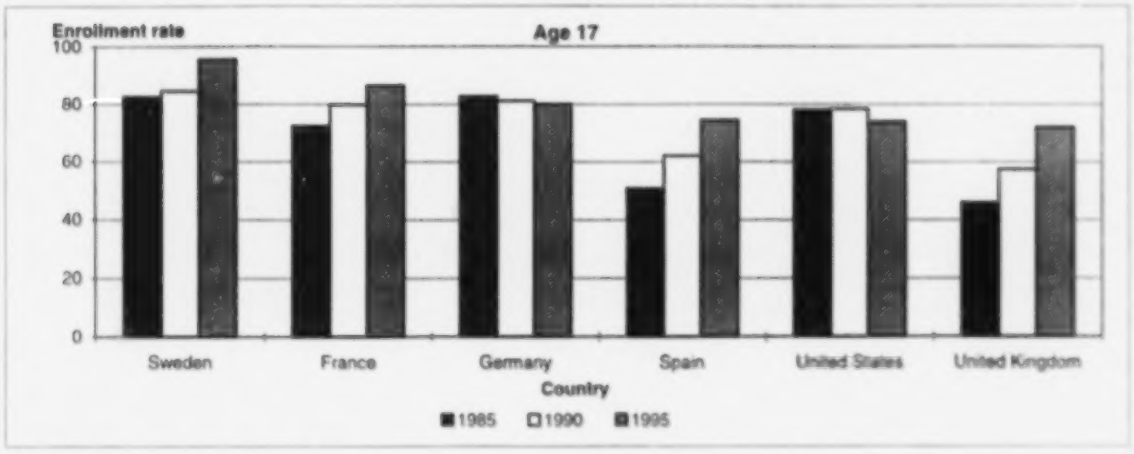
- Because in many countries upper secondary students typically graduate at age 17, enrollment in upper secondary at age 18 tends to be much lower in most OECD countries than at ages 16 or 17. Nevertheless, in virtually all OECD countries reporting data, the enrollment rates at age 18 increased between 1985 and 1995. Sweden had the largest increase, followed by Norway and the Netherlands. Among reporting G-7 nations, Germany and the United States had smaller increases than France and the United Kingdom.

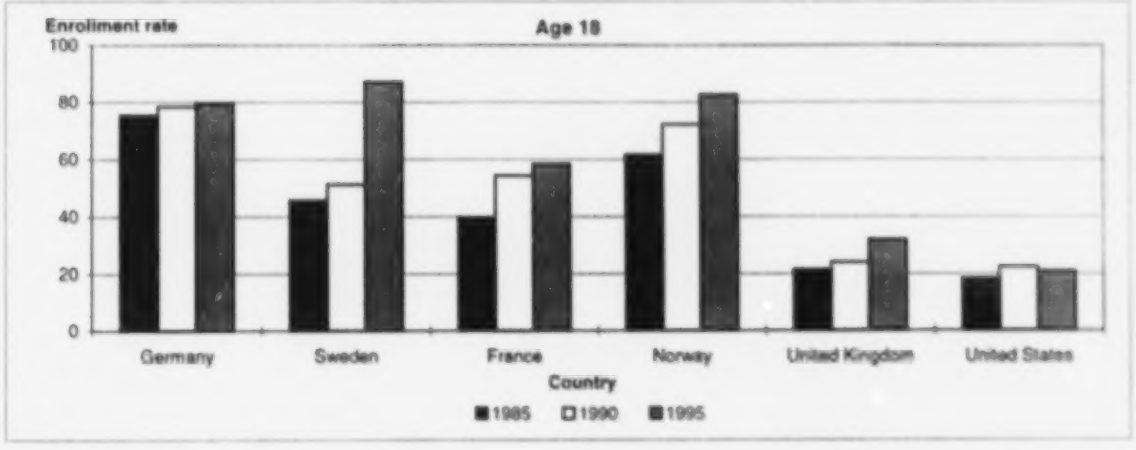
- There is great cross-country variation in enrollment rates in upper secondary at age 19 due to differences in typical age of graduation. Nevertheless, all of the countries reporting data experienced an increase in the enrollment rate of 19-year-olds between 1985 and 1995. France and the Netherlands experienced the largest increases.

*Table S-3, in the Supplementary Notes and Tables section, shows the legal school-leaving age for compulsory education in each country.

Indicator 6.—Enrollment rates in upper secondary education: 1985, 1990, and 1995







SOURCE: Organization for Economic Co-operation and Development (OECD), Education Database, 1998; U.S. Department of Commerce, Bureau of the Census, International Database, 1998.

Table 6-1.—Enrollment rates in upper secondary education, age 16: 1985–1995

Country	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1985–95 change[1]
Australia	—	—	—	—	—	—	64.0	63.4	76.1	77.1	78.1	—
Austria	84.1	—	—	—	—	—	—	—	89.7	91.0	92.3	8.2
Belgium	90.0	92.4	92.8	91.2	—	—	90.2	93.4	98.8	99.5	98.9	8.9
Canada	—	—	—	—	—	—	84.0	87.6	87.7	87.7	86.5	—
Czech Republic	—	—	—	—	—	—	—	88.1	—	88.4	—	—
Denmark	31.2	31.3	32.5	34.9	35.4	34.6	33.8	31.9	31.3	29.5	28.9	-2.3
Finland	74.6	—	—	—	—	89.7	—	83.6	82.7	87.8	84.3	9.7
France	67.0	65.7	64.3	65.3	66.3	68.2	70.0	72.2	—	77.2	78.6	11.6
Germany[2]	52.3	53.0	54.0	53.6	42.0	46.5	—	—	40.0	41.6	42.6	-9.7
Greece	—	—	—	—	—	—	—	78.9	80.2	81.6	79.0	—
Hungary	—	—	—	—	—	—	72.3	78.5	—	84.9	86.8	—
Iceland	—	—	—	—	—	—	—	—	—	85.4	88.5	—
Ireland	—	70.0	71.2	75.5	76.0	79.2	79.1	81.6	83.9	84.9	83.8	—
Italy	52.4	—	—	—	—	—	—	—	—	—	—	—
Japan	—	—	—	—	—	93.5	98.0	99.6	—	98.4	100.4	—
Korea	—	—	—	—	—	—	—	—	86.6	89.6	90.5	—
Luxembourg	—	60.4	60.6	59.3	55.6	—	—	—	—	—	—	—
Mexico	—	—	—	—	—	—	—	—	26.7	—	28.2	—
Netherlands	41.7	41.0	42.8	43.1	44.3	45.0	46.0	52.0	—	51.8	53.0	11.3
New Zealand	—	65.9	73.3	76.3	79.0	79.9	84.2	85.5	—	95.6	98.5	—
Norway	83.4	84.5	85.3	85.2	87.2	90.4	91.3	91.9	—	92.4	94.1	10.7
Poland	—	—	—	—	—	—	—	83.8	87.8	88.1	—	—
Portugal	18.0	19.9	17.5	29.8	—	—	40.8	—	40.2	49.5	49.3	31.3
Russia[3]	—	—	—	—	—	—	—	44.9	—	—	—	—
Spain	58.2	60.4	61.0	65.0	68.6	70.6	72.3	74.4	78.1	79.9	82.3	24.1
Sweden	86.7	88.1	84.9	84.6	83.8	83.1	82.9	86.2	91.2	92.1	92.4	5.7
Switzerland	58.1	58.4	58.6	59.5	59.9	61.9	61.4	56.7	55.1	54.5	52.9	-5.2
Turkey	20.5	21.6	23.5	24.2	25.9	27.3	29.2	31.8	—	37.7	37.8	17.3
United Kingdom	67.0	68.1	68.3	71.2	74.7	75.6	77.2	—	85.3	86.4	83.9	16.9
United States	83.6	84.4	85.6	86.9	87.6	84.8	82.3	85.2	86.1	88.8	81.7	-1.9
Average[4]	63.6	64.5	64.5	66.2	67.1	67.0	66.5	66.9	68.3	69.0	67.6	4.1

— No data were reported or data were incomplete or inconsistent.

[1]Percentage points change between 1985 and 1995.

[2]Pre-1991 numbers refer to Western Germany (Federal Republic of Germany before unification).

[3]Not an OECD member country.

[4]Average is for countries reporting data for all years included in the table.

NOTE: Countries in bold are G-7 countries. Enrollment data include full-time and part-time enrollments. See supplemental notes and tables for an explanation of why rates in some countries exceed 100.

SOURCE: Organization for Economic Co-operation and Development (OECD). Education Database, 1998; U.S. Department of Commerce, Bureau of the Census, International Database, 1998.

Table 6-2.—Enrollment rates in upper secondary education, age 17: 1985–1995

Country	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1985–95 change[1]
Australia	—	—	—	—	—	—	55.9	57.0	70.7	71.4	72.9	—
Austria	77.0	—	—	—	—	—	—	—	81.5	85.7	87.0	10.0
Belgium	80.9	82.6	84.7	85.9	—	—	87.4	92.1	98.4	97.8	96.7	15.8
Canada	—	—	—	—	—	—	66.9	66.2	70.5	71.3	68.5	—
Czech Republic	—	—	—	—	—	—	58.9	—	—	61.9	72.4	—
Denmark	69.3	69.5	70.6	72.3	72.9	73.1	73.1	73.6	72.5	73.4	73.3	4.0
Finland	80.5	—	—	—	—	81.7	—	84.7	87.2	89.6	88.5	8.0
France	72.4	73.8	73.8	75.5	77.8	79.7	81.5	82.9	—	85.8	86.5	14.1
Germany[2]	82.7	83.3	84.5	82.8	—	81.2	—	—	76.1	80.3	80.1	-2.6
Greece	—	—	—	—	—	—	—	57.7	57.7	57.0	55.8	—
Hungary	—	—	—	—	—	—	49.4	49.4	—	70.3	72.2	—
Iceland	—	—	—	—	—	—	—	—	—	74.4	77.4	—
Ireland	—	56.4	59.1	60.5	64.5	68.0	67.1	70.0	72.7	75.1	74.9	—
Italy	45.3	—	—	—	—	—	—	—	—	—	—	—
Japan	—	—	—	—	—	88.6	91.0	95.5	—	97.2	96.6	—
Korea	—	—	—	—	—	—	—	—	80.9	82.3	88.0	—
Luxembourg	—	65.0	65.8	66.3	65.5	—	—	—	—	—	59.7	—
Mexico	—	—	—	—	—	—	—	—	23.3	24.0	24.9	—
Netherlands	55.6	55.1	56.6	56.6	57.3	58.5	59.8	73.7	—	70.9	73.7	18.1
New Zealand	—	34.1	44.2	47.0	53.3	57.2	59.6	64.8	—	75.7	76.9	—
Norway	76.1	77.1	75.9	75.3	78.2	82.6	84.8	87.0	—	90.6	90.2	14.1
Poland	—	—	—	—	—	—	—	80.1	83.1	86.0	—	—
Portugal	22.3	25.8	25.2	33.6	—	—	49.2	—	47.8	54.8	58.8	36.5
Russia[3]	—	—	—	—	—	—	—	17.4	—	—	—	—
Spain	50.9	51.9	53.6	56.6	59.5	62.1	63.0	65.8	69.4	72.8	74.4	23.5
Sweden	82.4	84.7	85.6	85.9	85.6	84.6	85.0	87.6	92.1	94.1	95.6	13.2
Switzerland	78.8	79.4	79.5	80.1	81.0	81.7	82.0	77.5	77.2	76.6	76.4	-2.4
Turkey	12.7	14.1	15.0	16.1	17.2	17.3	18.3	—	—	21.0	23.9	11.2
United Kingdom	45.9	45.9	48.7	50.7	54.6	57.4	59.3	75.9	70.1	73.2	72.0	26.1
United States	78.1	73.9	72.7	72.5	80.1	78.4	74.1	69.9	83.5	79.2	73.9	-4.2
Average[4]	67.6	67.5	68.5	69.7	72.3	72.9	72.8	75.1	77.5	78.2	77.6	10.0

— No data were reported or data were incomplete or inconsistent.

[1]Percentage points change between 1985 and 1995.

[2]Pre-1991 numbers refer to Western Germany (Federal Republic of Germany before unification).

[3]Not an OECD member country.

[4]Average is for countries reporting data for all years included in the table.

NOTE: Countries in bold are G-7 countries. Enrollment data include full-time and part-time enrollments.

SOURCE: Organization for Economic Co-operation and Development (OECD), Education Database, 1998; U.S. Department of Commerce, Bureau of the Census, International Database, 1998.

Table 6-3.—Enrollment rates in upper secondary education, age 18: 1985–1995

Country	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1985-95 change[1]
Australia	—	—	—	—	—	—	14.4	13.6	30.6	28.8	29.4	—
Austria	42.4	—	—	—	—	—	—	—	53.4	55.2	56.0	13.6
Belgium	40.4	41.4	42.6	43.8	—	—	46.6	48.1	53.8	53.5	52.1	11.7
Canada	—	—	—	—	—	—	34.2	35.3	35.8	40.3	34.2	—
Czech Republic	—	—	—	—	—	—	—	—	—	24.6	30.7	—
Denmark	64.1	65.6	67.0	67.4	67.8	66.7	67.2	68.4	67.9	68.6	70.1	6.0
Finland	65.2	—	—	—	—	68.8	—	79.5	79.7	80.0	79.3	14.1
France	39.2	42.5	45.0	47.9	51.2	54.2	56.3	57.8	—	59.1	58.3	19.1
Germany[2]	75.3	77.9	78.3	76.1	—	78.4	—	—	75.0	80.4	79.4	4.1
Greece	—	—	—	—	—	—	—	17.2	16.7	17.5	13.9	—
Hungary	—	—	—	—	—	—	17.8	16.8	—	36.7	39.9	—
Iceland	—	—	—	—	—	—	—	—	—	66.8	65.4	—
Ireland	—	21.8	22.8	23.9	25.0	30.6	31.2	33.0	36.5	48.6	47.9	—
Italy	34.5	—	—	—	—	—	—	—	—	—	—	—
Japan	—	—	—	—	—	—	—	—	—	—	—	—
Korea	—	—	—	—	—	—	—	—	24.8	21.5	22.7	—
Luxembourg	—	49.3	52.5	54.0	54.7	—	—	—	—	—	64.7	—
Mexico	—	—	—	—	—	—	—	—	12.9	13.2	13.3	—
Netherlands	44.8	46.4	47.0	47.1	48.2	49.1	50.5	64.4	—	62.5	64.4	19.6
New Zealand	—	6.3	15.4	13.3	16.4	17.7	19.0	22.5	—	30.5	32.9	—
Norway	61.5	62.5	61.1	61.1	63.6	72.2	74.4	77.5	—	82.6	82.6	21.1
Poland	—	—	—	—	—	—	—	48.7	60.0	62.8	—	—
Portugal	20.9	23.4	26.5	27.1	—	—	35.2	—	32.4	34.0	38.3	17.4
Russia[3]	—	—	—	—	—	—	—	—	—	—	—	—
Spain	26.7	27.6	28.4	30.1	30.8	33.2	34.3	35.0	38.7	42.2	43.1	16.4
Sweden	45.6	45.6	48.2	49.3	50.3	51.2	54.8	62.8	70.1	81.4	87.1	41.5
Switzerland	73.3	74.0	74.2	74.6	75.1	75.5	75.3	73.8	73.9	73.8	74.4	1.1
Turkey	8.6	7.4	8.2	8.2	9.3	9.0	9.5	—	—	9.5	10.5	1.9
United Kingdom	21.4	21.3	21.2	21.3	21.8	24.1	24.8	35.2	31.6	32.6	31.9	10.5
United States	18.5	17.2	19.7	18.3	20.5	22.3	21.1	20.2	26.3	26.0	20.9	2.4
Average[4]	41.6	41.9	43.1	43.5	44.4	45.5	46.3	49.2	51.4	54.1	54.6	13.0

— No data were reported or data were incomplete or inconsistent.

[1]Percentage points change between 1985 and 1995.

[2]Pre-1991 numbers refer to Western Germany (Federal Republic of Germany before unification).

[3]Not an OECD member country.

[4]Average is for countries reporting data for all years included in the table.

NOTE: Countries in bold are G-7 countries. Enrollment data include full-time and part-time enrollments.

SOURCE: Organization for Economic Co-operation and Development (OECD). Education Database, 1998. U.S. Department of Commerce, Bureau of the Census, International Database, 1998.

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Table 6-4.—Enrollment rates in upper secondary education, age 19: 1985–1995

Country	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1985–95 change[1]
Australia	—	—	—	—	—	—	—	—	17.7	17.2	17.5	—
Austria	13.5	—	—	—	—	—	—	—	20.9	21.3	21.6	8.1
Belgium	17.9	19.4	19.9	20.6	—	—	22.9	23.9	28.8	29.2	28.7	10.8
Canada	—	—	—	—	—	—	10.9	10.7	11.4	16.1	10.4	—
Czech Republic	—	—	—	—	—	—	—	—	—	4.6	6.0	—
Denmark	44.5	47.0	48.5	49.4	49.9	47.5	45.9	48.4	47.7	48.6	51.3	6.8
Finland	21.8	—	—	—	—	23.2	—	26.7	24.9	23.7	27.4	5.6
France	14.7	17.0	19.7	22.8	26.0	28.8	31.4	33.8	—	34.0	34.2	19.5
Germany[2]	45.7	47.6	49.0	49.0	—	53.7	—	—	53.5	57.2	56.7	11.0
Greece	—	—	—	—	—	—	—	9.4	8.6	8.4	6.3	—
Hungary	—	—	—	—	—	—	10.4	9.3	—	15.6	17.8	—
Iceland	—	—	—	—	—	—	—	—	—	62.8	63.3	—
Ireland	—	4.1	4.5	4.7	5.3	—	—	12.5	13.8	14.2	13.2	—
Italy	10.5	—	—	—	—	—	—	—	—	—	—	—
Japan	—	—	—	—	—	—	—	—	—	—	—	—
Korea	—	—	—	—	—	—	—	—	2.9	2.6	2.7	—
Luxembourg	—	27.5	29.4	32.1	31.7	—	—	—	—	—	—	—
Mexico	—	—	—	—	—	—	—	—	6.5	6.7	6.5	—
Netherlands	27.3	30.0	29.5	30.0	30.6	31.5	32.5	44.5	—	43.9	45.1	17.8
New Zealand	—	—	10.5	6.9	10.5	9.2	10.7	8.1	—	13.5	16.7	—
Norway	24.8	24.4	21.9	21.9	22.1	32.0	33.9	35.0	—	36.5	33.2	8.4
Poland	—	—	—	—	—	—	—	17.1	29.9	31.3	—	—
Portugal	16.6	16.5	19.6	18.7	—	—	25.6	—	22.5	21.6	24.1	7.5
Russia[3]	—	—	—	—	—	—	—	—	—	—	—	—
Spain	14.0	14.8	15.2	16.5	17.1	18.7	19.5	20.5	22.9	25.2	25.9	11.9
Sweden	10.2	9.5	9.7	9.3	9.1	9.0	9.9	16.9	17.7	22.1	23.7	13.5
Switzerland	49.5	50.1	50.6	50.6	50.4	50.3	50.6	48.9	50.3	51.5	51.9	2.4
Turkey	4.8	4.6	3.8	4.0	5.7	6.1	5.9	—	—	5.9	6.3	1.5
United Kingdom	11.2	10.9	11.2	10.7	11.0	11.3	11.8	14.7	15.9	16.2	15.5	4.3
United States	3.2	3.9	3.7	4.2	3.8	4.3	5.0	5.7	5.5	6.8	4.1	0.9
Average[4]	22.1	22.7	23.1	23.4	23.5	23.5	23.8	25.9	26.7	28.4	28.7	6.6

— No data were reported or data were incomplete or inconsistent.

[1]Percentage points change between 1985 and 1995.

[2]Pre-1991 numbers refer to Western Germany (Federal Republic of Germany before unification).

[3]Not an OECD member country.

[4]Average is for countries reporting data for all years included in the table.

NOTE: Countries in bold are G-7 countries. Enrollment data include full-time and part-time enrollments.

SOURCE: Organization for Economic Co-operation and Development (OECD), Education Database, 1998. U.S. Department of Commerce, Bureau of the Census, International Database, 1998.

Indicator 7: Enrollment rates in higher education

As OECD economies become more and more dependent upon a highly skilled workforce, they tend to foster an increased demand for higher education. However, OECD governments must balance the demands for skilled workers with the financial costs of higher education. In most OECD countries, higher education includes both university and non-university institutions in both the public and the private sectors. Whether a student chooses to attend institutions of higher education could depend on the diversity and availability of programs offered by institutions of higher learning, the economic and social value placed on higher education, and the need for a more skilled workforce. The accessibility of higher education reflects a balance of governments' willingness to support higher education programs and their need for a talented pool of workers. Differences across countries may reflect different value systems towards education as well as different economic needs. Differences across time also may reflect changing economic and societal circumstances.

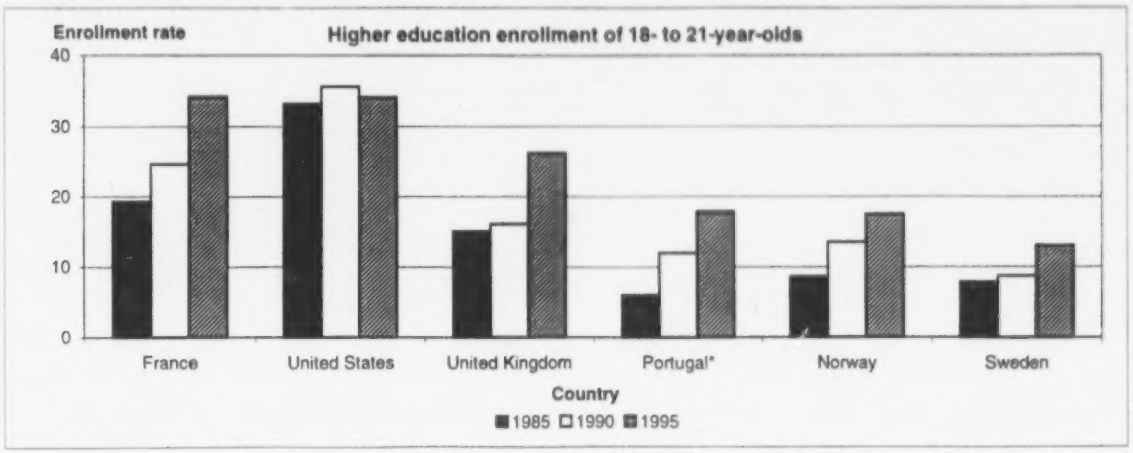
- Between 1985 and 1995, enrollment rates in higher education increased across all age groups in virtually all of the OECD countries reporting data. Many of the largest gains, especially those over 10 percentage points, occurred among 18- to 21-year-olds. Across all age groups, Portugal experienced the largest increase, followed by Norway, Finland, Belgium, and France. Of all the OECD countries, the United States and Canada were the only two countries enrolling more than one fifth of their 18- to 29-year-olds in higher education in 1995.

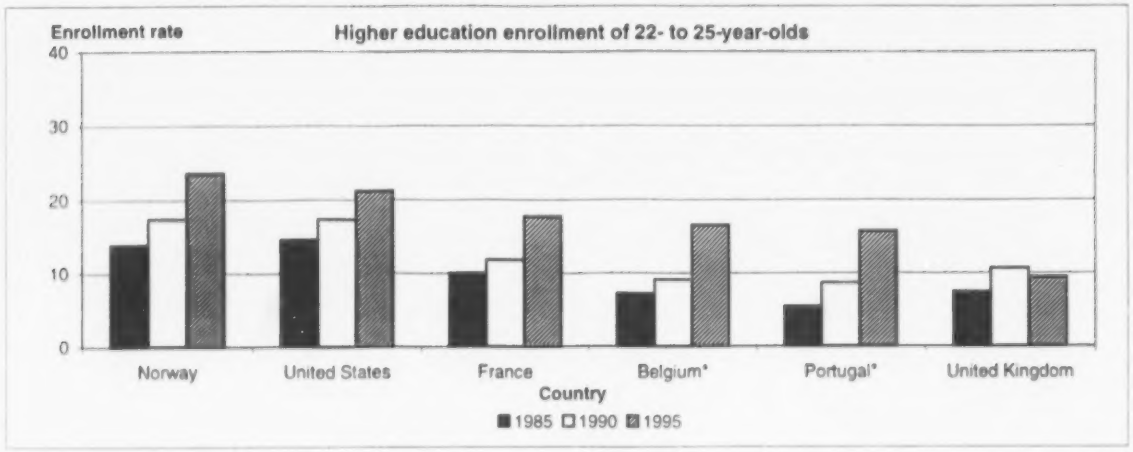
- Higher education enrollment rates at ages 18–21 increased for all reporting countries. Belgium, France, and Portugal witnessed the largest increases between 1985 and 1995. In contrast, the United States, although consistently enrolling a high percentage of 18- to 21-year-olds in higher education, experienced the lowest increase among reporting OECD countries. By 1995, four other countries were slightly higher than the United States in the 18- to 21 enrollment rate.

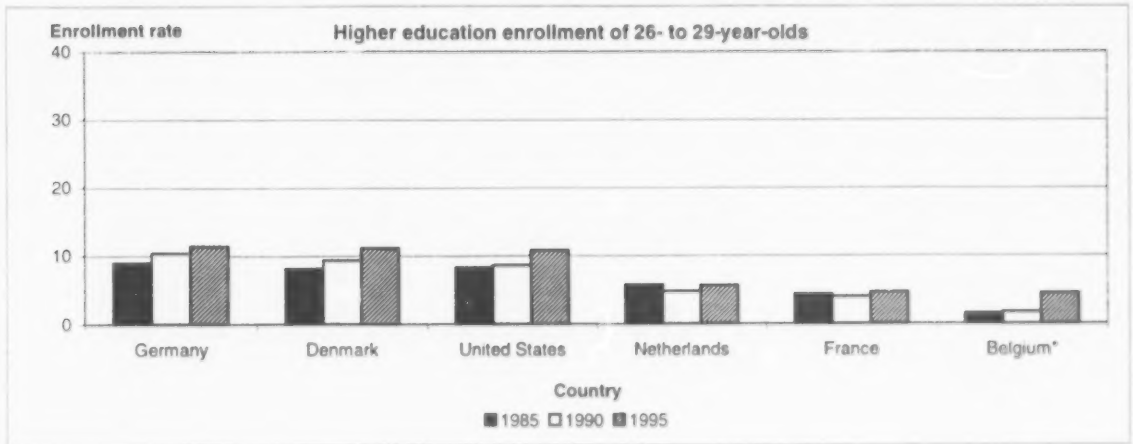
- All OECD countries reporting data also saw their higher education enrollment rates increase for 22- to 25-year-olds between 1985 and 1995. Portugal and Finland had the largest increases, with Portugal doubling its enrollment rate.

- The percentage of 26- to 29-year-olds enrolled in higher education also increased for all OECD countries between 1985 and 1995, with the exception of the Netherlands. Finland, Germany, Denmark, the United States, and Norway enrolled 10 percent or more of their population age 26–29 in some form of higher education program in 1995.

Indicator 7.—Enrollment rates in higher education: 1985, 1990, and 1995







*Data are from 1985, 1991, and 1995.
SOURCE: Organization for Economic Co-operation and Development (OECD), Education Database, 1998; U.S. Department of Commerce, Bureau of the Census, International Database, 1998.

Table 7-1.—Enrollment rates in higher education, ages 18–29: 1985–1995

Country	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1985–95 change[1]
Australia	—	—	—	—	—	—	16.2	—	16.8	17.1	17.5	—
Austria	—	—	—	—	—	—	—	12.4	10.7	10.9	12.2	—
Belgium	11.1	11.2	11.5	11.8	—	—	13.0	13.5	16.3	17.5	19.3	8.2
Canada	—	—	—	—	—	—	—	—	20.8	23.6	22.5	—
Czech Republic	—	—	—	—	—	—	—	—	—	8.5	9.3	—
Denmark	10.5	10.5	10.6	10.9	11.2	11.8	12.2	13.1	13.5	13.9	14.2	3.7
Finland	11.5	—	—	—	—	14.9	—	16.1	17.3	18.4	18.9	7.4
France	11.3	11.6	11.7	12.0	12.6	13.5	14.5	15.8	—	18.1	18.4	7.1
Germany[2]	—	11.1	11.1	11.1	11.4	11.8	—	—	—	—	—	—
Greece	—	—	—	—	—	—	—	9.5	15.8	16.3	15.5	—
Hungary	—	—	—	—	—	—	5.9	6.3	—	7.2	7.6	—
Iceland	—	—	—	—	—	—	—	—	—	10.9	11.6	—
Ireland	—	—	—	—	—	—	—	13.5	—	14.4	—	—
Italy	—	—	—	—	—	—	—	—	—	—	—	—
Japan	—	—	—	—	—	—	—	—	—	—	—	—
Korea	—	—	—	—	—	—	—	—	15.8	16.8	18.0	—
Luxembourg	—	1.2	1.3	1.4	1.4	—	—	—	—	—	—	—
Mexico	—	—	—	—	—	—	—	—	—	—	5.6	—
Netherlands	10.7	10.8	10.9	11.3	11.4	11.9	12.6	13.3	—	15.1	15.2	4.5
New Zealand	—	—	—	—	—	—	—	15.2	—	16.9	15.6	—
Norway	9.5	9.2	10.4	10.5	11.4	12.9	13.9	15.0	—	17.0	17.0	7.5
Poland	—	—	—	—	—	—	—	—	—	—	—	—
Portugal	4.7	4.0	5.1	—	—	—	8.1	—	11.7	12.8	13.4	8.7
Russia[3]	—	—	—	—	—	—	—	14.0	—	—	—	—
Spain	10.2	10.9	11.2	11.9	12.4	13.2	14.0	14.6	14.8	16.4	16.3	6.1
Sweden	8.5	8.4	8.6	8.7	8.7	8.8	9.1	9.9	10.7	11.4	12.2	3.7
Switzerland	7.1	7.2	7.5	7.6	7.9	8.4	8.8	9.1	9.4	9.6	9.8	2.7
Turkey	—	—	—	3.6	4.1	4.7	5.0	5.3	—	7.0	7.0	—
United Kingdom	—	—	—	—	—	—	8.8	8.9	10.4	11.5	12.5	—
United States	18.3	18.1	18.5	19.2	19.3	20.1	20.6	22.0	21.6	21.7	21.8	3.5
Average[4]	10.9	11.0	11.3	11.7	11.9	12.5	13.0	13.8	14.0	14.6	14.9	3.9

— No data were reported or data were incomplete or inconsistent.

[1]Percentage points change between 1985 and 1995.

[2]Pre-1991 numbers refer to Western Germany (Federal Republic of Germany before unification).

[3]Not an OECD member country.

[4]Average is for countries reporting data for all years included in the table.

NOTE: Countries in bold are G-7 countries. Enrollment rates are based on full-time and part-time enrollments.

SOURCE: Organization for Economic Co-operation and Development (OECD). Education Database. 1998. U.S. Department of Commerce, Bureau of the Census, International Database. 1998.

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Table 7-2.—Enrollment rates in higher education, ages 18–21: 1985–1995

Country	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1985–95 change[1]
Australia	—	—	—	—	—	—	30.0	—	29.4	29.6	30.2	—
Austria	—	—	—	—	—	—	—	13.2	11.5	12.0	14.2	—
Belgium	24.5	25.2	26.4	27.2	—	—	30.4	31.4	35.3	37.4	40.7	16.2
Canada	—	—	—	—	—	—	—	—	35.2	40.5	37.9	—
Czech Republic	—	—	—	—	—	—	—	13.7	—	14.6	15.9	—
Denmark	7.4	7.2	7.3	7.6	7.5	7.4	8.2	9.2	9.5	9.1	8.9	1.5
Finland	9.3	—	—	—	—	13.6	—	15.4	16.1	16.6	17.5	8.2
France	19.3	20.2	20.9	21.8	23.3	24.6	26.6	29.0	—	33.3	34.2	14.9
Germany[2]	8.8	8.5	8.2	7.8	8.1	8.5	—	—	—	—	—	—
Greece	—	—	—	—	—	—	—	—	35.6	36.7	32.9	—
Hungary	—	—	—	—	—	—	9.7	9.7	—	10.7	11.6	—
Iceland	—	—	—	—	—	—	—	—	—	7.9	7.9	—
Ireland	—	16.3	16.8	17.5	19.2	20.5	21.0	25.1	26.6	30.5	29.1	—
Italy	—	—	—	—	—	—	—	—	—	—	—	—
Japan	—	—	—	—	—	—	—	—	—	—	—	—
Korea	—	—	—	—	—	—	—	—	26.6	30.6	34.4	—
Luxembourg	—	2.6	2.7	3.2	3.3	—	—	—	—	—	—	—
Mexico	—	—	—	—	—	—	—	—	—	—	7.1	—
Netherlands	14.4	14.6	15.1	15.9	16.7	17.9	19.1	20.1	—	22.1	23.2	8.8
New Zealand	—	16.4	19.5	20.0	24.3	20.7	22.5	25.3	—	30.0	27.9	—
Norway	8.6	8.8	9.4	9.9	11.5	13.5	14.4	15.4	—	17.1	17.5	8.9
Poland	—	—	—	—	—	—	—	11.4	12.5	14.4	—	—
Portugal	5.9	4.9	5.5	—	—	—	12.0	—	17.7	19.3	17.9	12.0
Russia[3]	—	—	—	—	—	—	—	26.0	—	—	—	—
Spain	15.0	16.2	17.1	18.6	20.1	21.3	21.4	22.6	22.7	24.9	25.6	10.6
Sweden	7.8	7.8	8.3	8.3	8.5	8.7	9.3	10.6	11.3	12.3	13.0	5.2
Switzerland	5.7	5.6	5.7	5.8	6.0	6.4	6.6	7.2	7.4	7.6	7.7	2.0
Turkey	—	—	—	5.8	6.4	7.3	7.9	8.2	—	10.6	10.3	—
United Kingdom	15.0	18.2	18.7	19.4	15.1	16.1	17.6	18.3	21.5	24.0	26.2	11.2
United States	33.2	34.0	34.1	36.8	35.9	35.6	36.9	39.3	35.1	34.8	34.1	0.9
Average[4]	14.0	14.8	15.2	16.1	15.5	15.9	16.6	17.9	17.9	18.8	19.3	5.2

— No data were reported or data were incomplete or inconsistent.

[1]Percentage points change between 1985 and 1995.

[2]Pre-1991 numbers refer to Western Germany (Federal Republic of Germany before unification).

[3]Not an OECD member country.

[4]Average is for countries reporting data for all years included in the table.

NOTE: Countries in bold are G-7 countries. Enrollment rates are based on full-time and part-time enrollments.

SOURCE: Organization for Economic Co-operation and Development (OECD), Education Database, 1998; U.S. Department of Commerce, Bureau of the Census, International Database, 1998.

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Table 7-3.—Enrollment rates in higher education, ages 22–25: 1985–1995

Country	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1985–95 change[1]
Australia	—	—	—	—	—	—	11.1	14.8	13.1	13.9	14.6	—
Austria	—	—	—	—	—	—	—	15.4	13.0	13.3	15.0	—
Belgium	7.2	7.4	7.7	8.0	—	—	9.1	9.7	13.2	14.7	16.5	9.3
Canada	—	—	—	—	—	—	—	—	21.0	23.1	22.0	—
Czech Republic	—	—	—	—	—	—	—	—	—	—	—	—
Denmark	16.3	16.2	16.2	16.4	16.9	17.9	18.4	19.8	20.9	22.0	22.6	6.3
Finland	17.3	—	—	—	—	20.7	—	22.5	24.9	27.3	27.4	10.1
France	10.0	10.1	10.1	10.3	10.7	11.8	12.7	14.0	—	17.0	17.7	7.7
Germany[2]	—	15.5	15.4	15.4	15.5	15.9	—	—	15.9	16.4	17.0	—
Greece	—	—	—	—	—	—	—	—	9.6	10.1	10.6	—
Hungary	—	—	—	—	—	—	5.7	6.3	—	6.8	7.8	—
Iceland	—	—	—	—	—	—	—	—	—	18.8	20.3	—
Ireland	—	—	—	—	—	—	—	9.4	11.2	7.9	15.0	—
Italy	—	—	—	—	—	—	—	—	—	—	—	—
Japan	—	—	—	—	—	—	—	—	—	—	—	—
Korea	—	—	—	—	—	—	—	—	17.3	16.7	16.6	—
Luxembourg	—	1.1	1.3	1.3	1.3	—	—	—	—	—	—	—
Mexico	—	—	—	—	—	—	—	—	—	—	6.4	—
Netherlands	11.9	11.9	12.0	12.4	12.6	13.4	14.5	15.9	—	18.4	18.7	6.8
New Zealand	—	11.3	14.5	14.4	17.6	14.8	16.5	11.5	—	12.5	11.9	—
Norway	13.9	13.2	14.9	15.0	15.6	17.4	18.9	20.4	—	23.6	23.6	9.7
Poland	—	—	—	—	—	—	—	13.3	9.1	10.7	—	—
Portugal	5.4	5.0	6.7	—	—	—	8.6	—	12.1	13.4	15.7	10.3
Russia[3]	—	—	—	—	—	—	—	16.1	—	—	—	—
Spain	10.7	11.3	11.6	12.3	12.6	13.5	14.6	15.2	15.5	17.4	17.5	6.8
Sweden	11.3	11.2	11.1	11.1	11.2	11.4	11.8	12.7	14.0	15.3	16.6	5.3
Switzerland	10.6	10.6	11.0	11.1	11.5	12.1	12.8	13.2	13.8	14.2	14.7	4.1
Turkey	—	—	—	2.6	3.8	4.3	4.6	5.0	—	6.8	7.3	—
United Kingdom	7.4	8.8	3.5	3.6	8.4	10.6	6.1	6.6	7.5	8.5	9.4	2.0
United States	14.6	13.9	14.8	15.0	15.7	17.3	16.9	18.5	20.8	20.9	21.2	6.6
Average[4]	12.7	12.7	12.9	13.2	13.6	14.4	14.9	15.9	17.0	18.0	18.5	5.8

— No data were reported or data were incomplete or inconsistent.

[1]Percentage points change between 1985 and 1995.

[2]Pre-1991 numbers refer to Western Germany (Federal Republic of Germany before unification).

[3]Not an OECD member country.

[4]Average is for countries reporting data for all years included in the table.

NOTE: Countries in bold are G-7 countries. Enrollment rates are based on full-time and part-time enrollments.

SOURCE: Organization for Economic Co-operation and Development (OECD), Education Database, 1998; U.S. Department of Commerce, Bureau of the Census, International Database, 1998.

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Table 7-4.—Enrollment rates in higher education, ages 26–29: 1985–1995

Country	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1985–95 change[1]
Australia	—	—	—	—	—	—	7.8	—	8.1	8.1	8.5	—
Austria	—	—	—	—	—	—	—	8.9	8.0	8.0	8.5	—
Belgium	1.5	1.5	1.5	1.5	—	—	1.7	1.7	3.4	3.8	4.4	2.9
Canada	—	—	—	—	—	—	—	—	9.1	9.9	9.5	—
Czech Republic	—	—	—	—	—	—	—	—	—	1.5	2.1	—
Denmark	8.2	8.1	8.2	8.4	8.5	9.3	9.4	10.1	10.4	10.9	11.2	3.0
Finland	7.9	—	—	—	—	10.2	—	10.7	11.4	12.2	12.9	5.0
France	4.3	4.2	4.0	3.8	3.8	3.9	4.0	4.1	—	4.6	4.6	0.3
Germany[2]	8.9	9.2	9.4	9.9	10.2	10.3	—	—	9.8	10.9	11.4	2.5
Greece	—	—	—	—	—	—	—	0.8	2.0	2.2	3.2	—
Hungary	—	—	—	—	—	—	1.5	2.1	—	2.8	2.2	—
Iceland	—	—	—	—	—	—	—	—	—	6.8	6.9	—
Ireland	—	—	—	—	—	—	—	3.1	—	2.4	—	—
Italy	—	—	—	—	—	—	—	—	—	—	—	—
Japan	—	—	—	—	—	—	—	—	—	—	—	—
Korea	—	—	—	—	—	—	—	—	2.9	2.6	3.3	—
Luxembourg	—	—	—	—	—	—	—	—	—	—	—	—
Mexico	—	—	—	—	—	—	—	—	—	—	2.8	—
Netherlands	5.7	5.6	5.5	5.5	4.9	4.7	4.7	4.8	—	6.2	5.6	-0.1
New Zealand	—	—	—	—	—	—	—	7.3	—	7.5	7.3	—
Norway	6.2	5.7	6.9	6.5	6.8	7.5	8.2	9.0	—	10.4	10.0	3.8
Poland	—	—	—	—	—	—	—	—	—	—	—	—
Portugal	2.3	2.0	2.8	—	—	—	3.3	—	4.5	4.8	5.9	3.6
Russia[3]	—	—	—	—	—	—	—	0.8	—	—	—	—
Spain	4.0	4.3	4.2	4.3	4.2	4.5	5.5	5.7	5.7	6.4	5.5	1.5
Sweden	6.5	6.4	6.2	6.3	6.2	6.1	6.2	6.5	7.2	7.2	7.5	1.0
Switzerland	5.2	5.4	5.6	5.8	6.1	6.4	7.0	7.1	7.1	7.1	7.2	2.0
Turkey	—	—	—	1.9	1.7	2.2	2.0	2.2	—	3.0	3.2	—
United Kingdom	—	—	—	—	—	—	3.4	2.9	4.0	4.4	4.8	—
United States	8.2	8.2	8.4	7.6	7.6	8.6	9.2	9.7	10.3	10.6	10.8	2.6
Average[4]	6.4	6.5	6.5	6.5	6.5	7.0	7.5	7.8	8.1	8.5	8.4	2.0

— No data were reported or data were incomplete or inconsistent.

[1]Percentage points change between 1985 and 1995.

[2]Pre-1991 numbers refer to Western Germany (Federal Republic of Germany before unification).

[3]Not an OECD member country.

[4]Average is for countries reporting data for all years included in the table.

NOTE: Countries in bold are G-7 countries. Enrollment rates are based on full-time and part-time enrollments.

SOURCE: Organization for Economic Co-operation and Development (OECD), Education Database, 1998; U.S. Department of Commerce, Bureau of the Census, International Database, 1998.

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PART III: FINANCIAL AND HUMAN RESOURCES

Indicator 8: Public direct expenditures on education as a percentage of GDP[1]

Gross domestic product is an aggregate measure of the value of goods and services produced in a country. The percentage of GDP spent on education from public sources reflects the value a country places on education. However, it is not a measure of total expenditures on education, since private investments are not included.[2] The allocation of public resources among the various education levels provides an indicator of the relative emphasis a country places on each different level of education. Changes in trends over time can help identify changes in the economy or changes in education priorities or structures.

- Public direct expenditures for all education levels varied between 3.3 and 6.9 percent of gross domestic product in all OECD countries except Finland and Greece in every year between 1985 and 1994. Over this period, public direct expenditures for education as a percentage of GDP increased in several OECD countries, led by Norway. In the United States, public direct expenditures on education increased slightly between 1985 and 1994, but dropped from a peak of 5.5 percent in 1991 to 4.8 percent in 1994.

- Between 1985 and 1994, public direct expenditures as a percent of GDP for the primary sector increased most in the United Kingdom. In the United States, public direct expenditures for the primary sector as a percent of GDP increased slightly. Germany consistently had the lowest level of public direct expenditure as a percent of GDP on primary education, even after reunification.

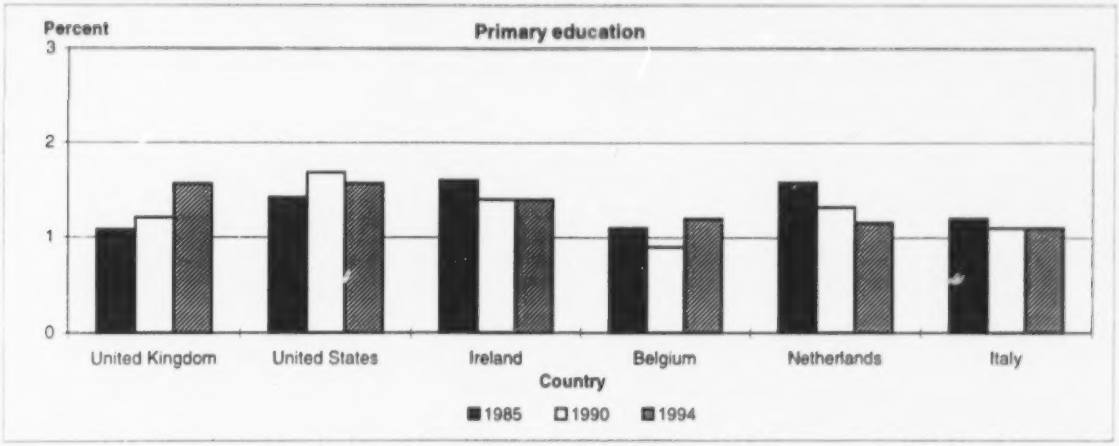
- Most OECD countries devote the largest share of education expenditures to the secondary sector. Except for Turkey and Canada, this share ranged from 1.1 to 3.0 percent between 1985 and 1994. Overall, public direct expenditures on the secondary level as a percent of GDP remained fairly stable between 1985 and 1994 in the majority of OECD countries reporting data. The Netherlands and Belgium experienced the most notable decreases. Expenditures as a percent of GDP on secondary education in the United States remained constant.

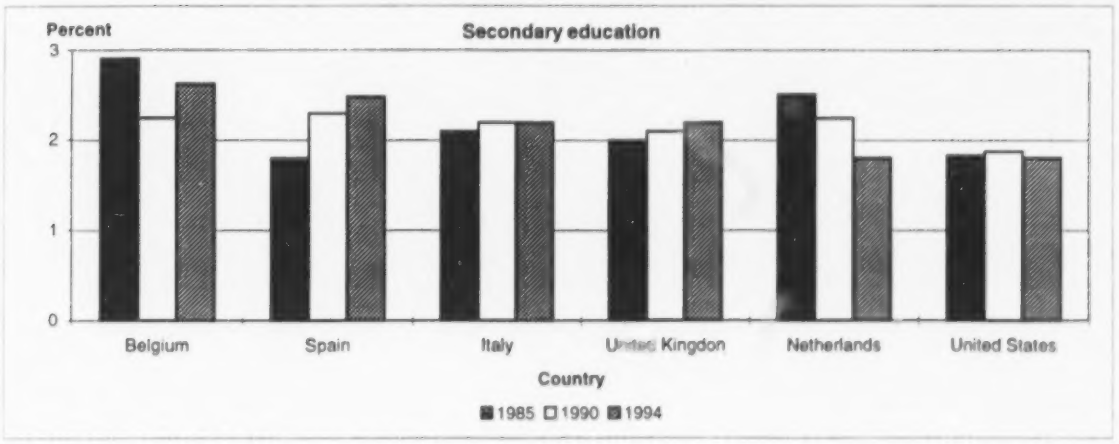
- The percentage of GDP spent on higher education remained constant or decreased slightly in most OECD countries between 1985 and 1994, after peaking in some countries in 1991. The largest decreases in spending on higher education occurred in Australia, Canada, the United Kingdom, and the Netherlands. Spending on higher education also decreased slightly in the United States. In contrast, Spain and Norway doubled their public direct expenditures on higher education as a percentage of GDP.

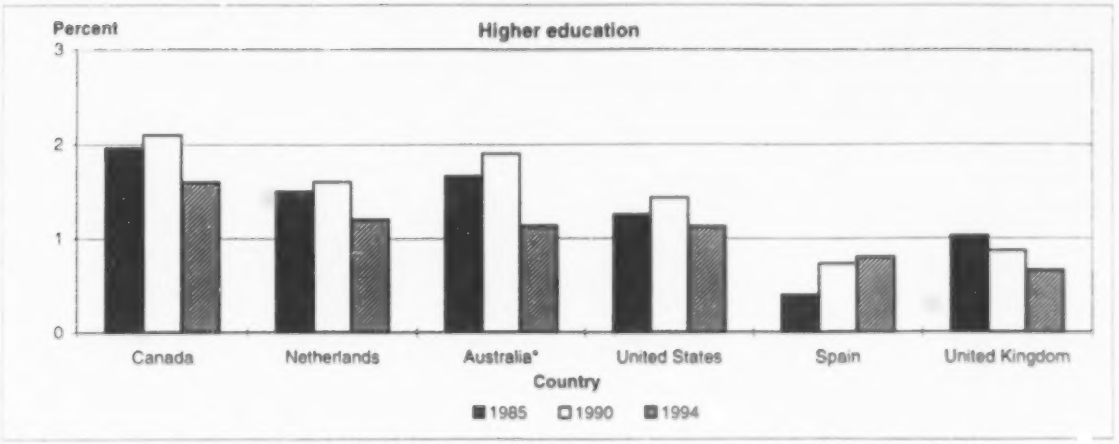
[1]Due to the lack of consistent information regarding private expenditures in many countries, this indicator focuses on public expenditures only.

[2]This indicator focuses on direct expenditures for institutions and, as such, excludes indirect educational expenditures in the form of student loans or subsidies to families. In almost every OECD country such indirect expenditures are a very small portion of government expenditures on education.

Indicator 8.—Public direct expenditures on education as a percentage of GDP: 1985, 1990, and 1994







*Data are from 1985, 1991, and 1994.

SOURCE: Organization for Economic Co-operation and Development (OECD), *Annual National Accounts*, vol. 1, 1997; Organization for Economic Co-operation and Development (OECD), Education Database, 1998.

Table 8-1.—Total public direct expenditures on education as a percentage of GDP: 1985–1994

Country	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1985-94 change[1]
Australia	5.4	5.3	4.9	4.8	—	—	4.4	4.6	4.7	4.4	-1.0
Austria	5.6	5.8	5.7	5.5	5.3	5.2	5.3	5.6	5.3	—	—
Belgium	6.3	6.1	5.8	5.5	5.6	5.1	5.3	5.3	5.5	5.5	-0.8
Canada	6.1	6.0	6.1	5.9	5.9	6.1	6.5	6.7	6.2	6.0	-0.1
Czech Republic	—	—	—	—	—	—	—	—	—	—	—
Denmark	6.2	5.9	6.2	6.4	6.4	6.2	6.1	6.1	6.7	6.5	0.3
Finland	5.8	5.8	5.8	5.8	5.7	6.0	7.0	7.7	7.3	6.6	0.8
France	—	—	—	—	5.0	5.0	5.2	5.4	5.6	5.6	—
Germany[2]	4.6	4.5	4.4	4.3	—	—	—	—	4.5	4.5	-0.1
Greece	—	—	—	—	—	—	—	—	2.7	3.1	—
Hungary	—	—	—	—	—	—	5.8	6.1	5.9	5.7	—
Iceland	—	—	—	—	—	—	—	—	4.6	4.5	—
Ireland	5.6	5.8	5.9	5.4	5.0	4.9	5.1	5.0	5.1	5.1	-0.5
Italy	4.7	4.8	4.9	4.9	5.0	5.2	—	5.0	5.0	4.6	-0.1
Japan	—	3.9	3.8	3.6	3.5	3.4	3.4	3.5	3.6	3.8	—
Korea	—	—	—	—	—	—	—	—	3.7	3.6	—
Luxembourg	—	4.9	5.3	5.2	5.0	—	—	—	—	—	—
Mexico	—	—	—	—	—	—	—	—	3.7	4.5	—
Netherlands	6.2	6.3	6.5	6.1	5.7	5.7	—	4.6	4.6	4.5	-1.7
New Zealand	—	4.9	4.8	4.8	5.9	6.2	6.3	5.9	5.8	5.4	—
Norway	5.1	5.5	5.7	5.9	5.9	5.9	6.1	6.8	6.8	6.9	1.8
Poland	—	—	—	—	—	—	—	—	—	—	—
Portugal	—	3.6	3.7	4.0	4.0	—	4.9	—	5.4	5.3	—
Russia[3]	—	—	—	—	—	—	—	—	—	—	—
Spain	3.6	3.6	3.7	3.9	4.1	4.3	4.4	4.4	4.5	4.8	1.2
Sweden	—	5.8	5.7	5.5	5.2	5.3	5.9	6.5	6.6	6.6	—
Switzerland	4.9	5.0	5.0	5.0	—	—	5.4	5.2	5.5	5.5	0.6
Turkey	—	—	—	—	—	—	—	—	3.3	3.3	—
United Kingdom	4.9	4.7	4.6	4.5	4.4	4.7	4.8	4.7	4.6	4.6	-0.3
United States	4.7	4.9	4.9	4.9	4.8	5.3	5.5	5.0	5.0	4.8	0.1
Average[4]	5.4	5.4	5.4	5.3	5.3	5.4	5.6	5.8	5.7	5.6	0.3

— No data were reported or data were incomplete or inconsistent.

[1]Percentage points change between 1985 and 1994.

[2]Pre-1991 numbers refer to Western Germany (Federal Republic of Germany before unification).

[3]Not an OECD member country.

[4]Average is for countries reporting data for all years included in the table.

NOTE: Countries in bold are G-7 countries. Because the finance survey form was modified in 1992, pre-1992 figures also include transfers and payments to private entities, and thus are not strictly comparable to later figures (see supplemental notes and tables). Direct public expenditure on educational services includes both amounts spent directly by governments to hire educational personnel and to procure other resources, and amounts provided by governments to public or private institutions.

SOURCE: Organization for Economic Co-operation and Development (OECD). Education Database. 1998. Organization for Economic Co-operation and Development (OECD). *Annual National Accounts*, vol.1. 1997.

Table 8-2.—Public direct expenditures on primary education as a percentage of GDP: 1985–1994

Country	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1985–94 change[1]
Australia	1.6	1.5	1.4	1.4	—	—	—	—	1.5	1.4	-0.2
Austria	1.0	1.0	1.0	1.0	0.9	0.9	1.0	1.0	1.0	—	—
Belgium	1.1	1.1	1.0	0.9	0.9	0.9	0.9	1.0	1.1	1.2	0.1
Canada	—	—	—	—	—	—	—	—	—	—	—
Czech Republic	—	—	—	—	—	—	—	—	—	—	—
Denmark	1.8	1.7	—	—	—	1.7	—	1.4	1.5	1.5	-0.3
Finland	—	—	—	—	—	—	—	2.1	2.0	1.9	—
France	—	—	—	—	1.0	1.0	1.0	1.0	1.1	1.1	—
Germany[2]	0.6	0.6	0.6	0.6	—	—	—	—	0.7	0.8	0.2
Greece	—	—	—	—	—	—	—	—	1.0	1.1	—
Hungary	—	—	—	—	—	—	1.1	1.2	1.2	1.2	—
Iceland	—	—	—	—	—	—	—	—	1.5	1.4	—
Ireland	1.6	1.7	1.7	1.6	1.5	1.4	1.5	1.4	1.4	1.4	-0.2
Italy	1.2	1.1	1.1	1.1	1.2	1.1	—	1.1	1.1	1.1	-0.1
Japan	—	1.5	1.4	1.4	—	—	—	1.3	1.4	1.4	—
Korea	—	—	—	—	—	—	—	—	1.7	1.6	—
Luxembourg	—	1.6	1.8	1.8	1.7	—	—	—	—	—	—
Mexico	—	—	—	—	—	—	—	—	1.5	1.8	—
Netherlands	1.6	1.6	1.5	1.5	1.4	1.3	—	1.1	1.2	1.2	-0.4
New Zealand	—	1.5	1.4	1.3	1.6	1.6	1.5	1.3	1.6	1.5	—
Norway[3]	1.6	1.6	1.7	1.7	1.7	1.5	1.5	1.6	1.5	1.6	0.0
Poland	—	—	—	—	—	—	—	—	—	—	—
Portugal	—	1.8	1.8	1.9	1.9	—	2.0	—	2.0	1.8	—
Russia[4]	—	—	—	—	—	—	—	—	—	—	—
Spain	1.1	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	-0.1
Sweden	—	2.1	2.1	2.1	1.9	1.9	2.1	1.9	2.0	2.0	—
Switzerland[5]	2.7	2.7	2.7	2.8	—	—	1.4	1.2	1.6	1.6	-1.1
Turkey	—	—	—	—	—	—	—	—	1.7	1.4	—
United Kingdom	1.1	1.1	1.1	1.1	1.1	1.2	1.3	1.5	1.6	1.6	0.5
United States	1.4	1.5	1.6	1.6	1.7	1.7	1.8	1.8	1.8	1.6	0.2
Average[6]	1.3	1.3	1.4	1.3	1.3	1.3	1.3	1.4	1.4	1.5	0.1

— No data were reported or data were incomplete or inconsistent.

[1]Percentage points change between 1985 and 1994.

[2]Pre-1991 numbers refer to Western Germany (Federal Republic of Germany before unification).

[3]Shift in trend between 1993 and 1994 reflects a change in classification of primary and secondary education.

[4]Not an OECD member country.

[5]Shift in trend between 1988 and 1991 reflects a change in classification of primary and secondary education.

[6]Average is for countries reporting data for all years included in the table.

NOTE: Countries in bold are G-7 countries. Because the finance survey form was modified in 1992, pre-1992 figures also include transfers and payments to private entities, and thus are not strictly comparable to later figures (see supplemental notes and tables). Direct public expenditure on educational services includes both amounts spent directly by governments to hire educational personnel and to procure other resources, and amounts provided by governments to public or private institutions.

SOURCE: Organization for Economic Co-operation and Development (OECD), Education Database, 1998. Organization for Economic Co-operation and Development (OECD), *Annual National Accounts*, vol.1, 1997.

Table 8-3.—Public direct expenditures on secondary education as a percentage of GDP: 1985–1994

Country	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1985–94 change[1]
Australia	1.9	1.8	1.7	1.6	—	—	2.4	2.8	2.0	1.8	-0.1
Austria	2.7	2.8	2.8	2.7	2.5	2.5	2.5	2.6	2.5	—	—
Belgium	2.9	2.8	2.6	2.5	2.4	2.2	2.3	2.2	2.5	2.6	-0.3
Canada	—	—	—	—	—	—	—	—	4.2	4.2	—
Czech Republic	—	—	—	—	—	—	—	—	2.3	2.7	—
Denmark	2.9	2.8	—	—	—	2.7	—	2.6	2.9	2.8	-0.1
Finland	—	—	—	—	—	—	—	2.7	2.7	2.5	—
France	—	—	—	—	2.3	2.4	2.5	2.7	2.9	2.9	—
Germany[2]	2.2	2.1	2.1	2.0	—	—	—	—	2.3	2.1	-0.1
Greece	—	—	—	—	—	—	—	—	1.1	1.3	—
Hungary	—	—	—	—	—	—	2.9	3.0	2.9	2.6	—
Iceland	—	—	—	—	—	—	—	—	2.0	1.9	—
Ireland	2.3	2.3	2.4	2.2	2.1	2.0	2.1	2.0	2.1	2.2	-0.1
Italy	2.1	2.2	2.2	2.2	2.3	2.2	—	2.3	2.4	2.2	0.1
Japan	—	1.6	1.6	1.5	—	—	—	1.4	1.5	1.6	—
Korea	—	—	—	—	—	—	—	—	1.3	1.3	—
Luxembourg	—	2.1	2.2	2.1	2.1	—	—	—	—	—	—
Mexico	—	—	—	—	—	—	—	—	1.2	1.5	—
Netherlands	2.5	2.5	2.6	2.5	2.3	2.2	—	1.8	1.8	1.8	-0.7
New Zealand	—	1.2	1.2	1.1	1.4	1.5	1.4	1.9	2.6	2.4	—
Norway	2.5	2.6	2.6	2.6	2.6	2.4	2.5	2.9	2.4	2.5	0.0
Poland	—	—	—	—	—	—	—	—	—	—	—
Portugal	—	1.1	1.1	1.2	1.1	—	1.8	—	1.9	2.1	—
Russia[3]	—	—	—	—	—	—	—	—	—	—	—
Spain	1.8	1.8	1.9	2.1	2.2	2.3	2.3	2.3	2.4	2.5	0.7
Sweden	—	2.6	2.5	2.3	2.3	2.3	2.6	2.4	2.6	2.5	—
Switzerland[4]	1.3	1.3	1.2	1.3	—	—	2.3	2.6	2.5	2.5	1.2
Turkey	—	—	—	—	—	—	—	—	0.8	0.7	—
United Kingdom	2.0	2.2	2.1	2.1	2.0	2.1	2.1	2.3	2.3	2.2	0.2
United States	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.8	1.9	1.8	0.0
Average[5]	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	0.1

— No data were reported or data were incomplete or inconsistent.

[1]Percentage points change between 1985 and 1994.

[2]Pre-1991 numbers refer to Western Germany (Federal Republic of Germany before unification).

[3]Not an OECD member country.

[4]Shift in trend between 1988 and 1991 reflects a change in classification of primary and secondary education.

[5]Average is for countries reporting data for all years included in the table.

NOTE: Countries in bold are G-7 countries. Because the finance survey form was modified in 1992, pre-1992 figures also include transfers and payments to private entities, and thus are not strictly comparable to later figures (see supplemental notes and tables). Direct public expenditure on educational services include both amounts spent directly by governments to hire educational personnel and to procure other resources, and amounts provided by governments to public or private institutions.

SOURCE: Organization for Economic Co-operation and Development (OECD). Education Database, 1998. Organization for Economic Co-operation and Development (OECD). *Annual National Accounts*, vol.1, 1997.

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Table 8-4.—Public direct expenditures on higher education as a percentage of GDP: 1985–1994

Country	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1985–94 change[1]
Australia	1.7	1.7	1.6	1.6	—	—	1.9	1.5	1.1	1.1	-0.6
Austria	1.0	1.1	1.1	1.1	1.1	1.0	1.1	1.1	1.0	—	—
Belgium	1.0	1.0	1.0	0.9	0.9	0.8	0.9	0.6	1.0	1.0	0.0
Canada	2.0	1.9	2.1	2.0	2.0	2.1	2.1	2.1	1.7	1.6	-0.4
Czech Republic	—	—	—	—	—	—	—	0.6	0.7	0.8	—
Denmark	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.3	1.3	1.4	0.2
Finland	—	—	—	—	—	—	—	1.9	1.8	1.5	—
France	—	—	—	—	0.7	0.7	0.8	0.8	0.9	0.9	—
Germany[2]	1.0	1.0	1.0	1.0	—	—	—	—	0.9	0.9	-0.1
Greece	—	—	—	—	—	—	—	—	0.7	0.7	—
Hungary	—	—	—	—	—	—	0.9	1.1	0.9	0.9	—
Iceland	—	—	—	—	—	—	—	—	0.7	0.7	—
Ireland	0.9	1.0	1.1	1.0	0.9	1.0	1.0	1.0	1.0	1.0	0.1
Italy	0.6	0.7	0.7	0.8	0.7	1.0	—	0.8	0.8	0.7	0.1
Japan	—	0.4	0.4	0.4	—	—	—	0.3	0.4	0.5	—
Korea	—	—	—	—	—	—	—	—	0.3	0.3	—
Luxembourg	—	0.2	0.2	0.2	0.2	—	—	—	—	—	—
Mexico	—	—	—	—	—	—	—	—	0.6	0.9	—
Netherlands	1.5	1.6	1.8	1.6	1.5	1.6	—	1.2	1.2	1.2	-0.3
New Zealand	—	1.4	1.3	1.5	1.7	2.2	1.8	1.4	1.2	1.1	—
Norway	0.7	0.8	0.9	0.9	1.0	1.1	1.2	1.3	1.3	1.4	0.7
Poland	—	—	—	—	—	—	—	—	—	—	—
Portugal	—	0.6	0.6	0.7	0.7	—	0.8	—	0.8	0.8	—
Russia[3]	—	—	—	—	—	—	—	—	—	—	—
Spain	0.4	0.4	0.5	0.5	0.6	0.7	0.8	0.8	0.8	0.8	0.4
Sweden	—	0.9	0.9	1.0	0.8	1.0	1.1	1.0	1.4	1.5	—
Switzerland	0.9	1.0	1.0	1.0	—	—	1.2	1.1	1.1	1.1	0.2
Turkey	—	—	—	—	—	—	—	—	0.8	1.2	—
United Kingdom	1.0	0.9	0.9	0.8	0.8	0.9	0.9	0.8	0.7	0.7	-0.3
United States	1.3	1.3	1.3	1.3	1.1	1.4	1.5	1.2	1.2	1.1	-0.2
Average[4]	1.1	1.1	1.1	1.1	1.1	1.2	1.2	1.1	1.1	1.1	0.1

— No data were reported or data were incomplete or inconsistent.

[1]Percentage points change between 1985 and 1994.

[2]Pre-1991 numbers refer to Western Germany (Federal Republic of Germany before unification).

[3]Not an OECD member country.

[4]Average is for countries reporting data for all years included in the table.

NOTE: Countries in bold are G-7 countries. Because the finance survey form was modified in 1992, pre-1992 figures also include transfers and payments to private entities, and thus are not strictly comparable to later figures (see supplemental notes and tables). Direct public expenditure on educational services include both amounts spent directly by governments to hire educational personnel and to procure other resources, and amounts provided by governments to public or private institutions.

SOURCE: Organization for Economic Co-operation and Development (OECD), Education Database, 1998; Organization for Economic Co-operation and Development (OECD), Annual National Accounts, vol.1, 1997.

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Indicator 9: Direct public expenditures per student in public and private schools (in constant 1995 U.S. dollars)[1]

Per student expenditures from public sources is a measure of how much public economic resources a country devotes to education.[2] It not only indicates how much emphasis a country places on public education, but reflects the public cost of educating students and the relative wealth of the countries. A comparison of this indicator across OECD countries may suggest the relative priority each country places on providing public funded education, and may reflect the different cost structures associated with national education systems.

- In most OECD countries for which data are available, public per student expenditures on education increased between 1985 and 1994, after adjustment for inflation. The largest increases occurred in Spain, Ireland, and Norway. The United States and Canada increased their per student expenditures by 11 and 10 percent, respectively, although for both countries the level of per student expenditures was lower in 1994 than it had been in 1991. In the Netherlands and the United Kingdom, per student expenditures on education decreased slightly.

- Public per student expenditures at the primary level also increased in most reporting OECD countries between 1985 and 1994, with the exception of Switzerland, the Netherlands, and Australia. The largest increases occurred in Spain, Ireland, and Italy. Per student expenditures at the primary level increased by 16 percent in the United States, placing it in fourth place in the amount spent on educating primary students in 1994.

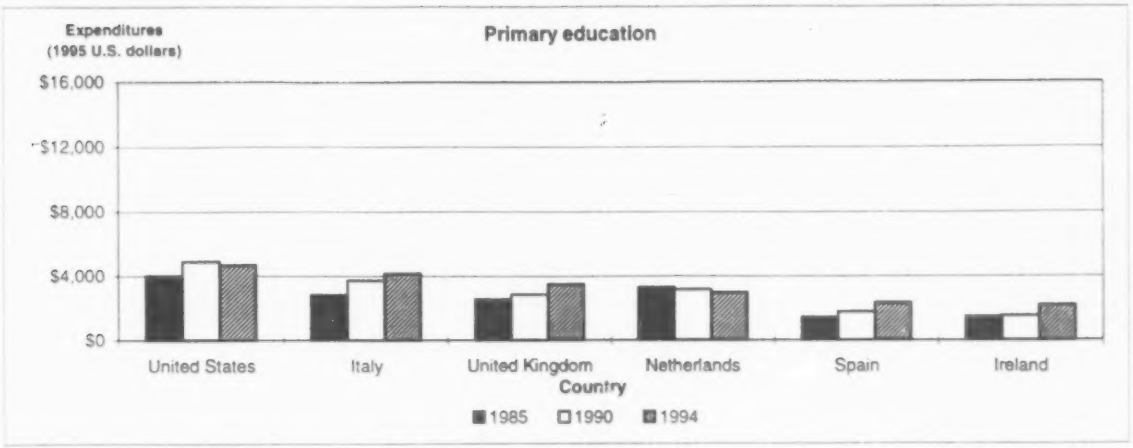
- At the secondary level, per student expenditures increased in every OECD country for which data are available between 1985 and 1994. In 1994, Switzerland was the highest spending country in expenditures per student. The growth in other countries ranged from 3 to 53 percent. The United States spent more per student at the secondary level than any of the other G-7 countries, but less than Switzerland.

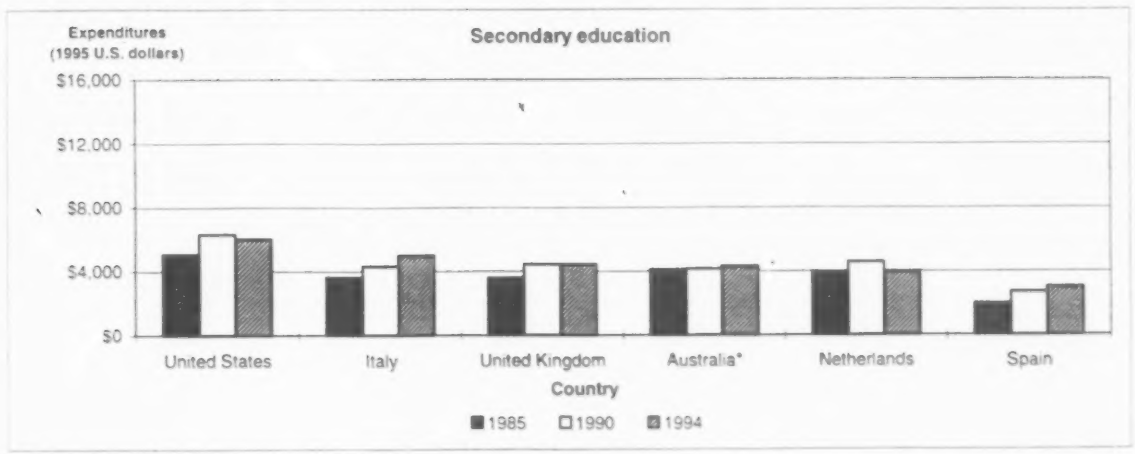
- Unlike at the other levels of education, per student expenditures in higher education decreased between 1985 and 1994 in most OECD countries reporting data. Sharp declines in per student expenditures in higher education occurred in the United Kingdom and the Netherlands. In the United States, per student expenditures dropped by 6 percent. Only Spain and Norway experienced significant increases in their per student expenditures in higher education.

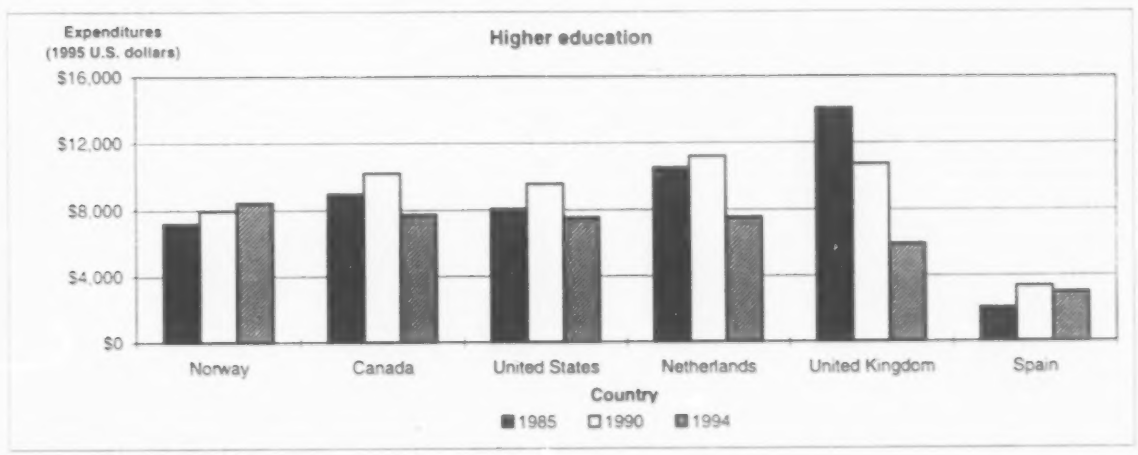
[1]Due to the lack of consistent information regarding private expenditures in many countries, this indicator focuses on public expenditures only.

[2]This indicator is based on direct public expenditures for institutions and, as such, excludes indirect educational expenditures in the form of student loans or subsidies to families. In almost every OECD country such indirect expenditures are a very small portion of government expenditures on education.

Indicator 9.—Direct public expenditures per student in public and private schools (in constant 1995 U.S. dollars): 1985, 1990, and 1994







*Data are from 1985, 1991, and 1994.
SOURCE: Organization for Economic Co-operation and Development (OECD), Education Database, 1998.

Table 9-1.—Direct public expenditures per student (in 1995 U.S. dollars) in public and private schools, all levels of education: 1985–1994

Country	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1985-94 change[1]
Australia	—	$4,121	$4,122	$3,994	—	—	$3,310	—	$3,894	$4,069	—
Austria	$4,793	4,976	4,958	4,969	$5,015	$5,091	5,286	$5,706	5,374	—	—
Belgium	—	—	—	—	—	—	—	4,553	4,891	—	—
Canada	5,370	5,513	5,837	5,937	6,015	5,957	6,057	6,073	5,559	5,914	10.1
Czech Republic	—	—	—	—	—	—	—	—	—	2,442	—
Denmark	5,339	5,348	5,648	5,945	6,076	6,044	6,132	5,746	6,265	6,275	17.5
Finland	3,936	4,048	4,147	4,378	4,422	4,540	4,852	4,970	5,452	4,926	25.1
France	—	—	—	—	3,967	4,068	4,256	4,427	—	4,416	—
Germany[2]	4,189	4,353	4,367	4,551	—	—	—	—	4,404	4,384	4.7
Greece	—	—	—	—	—	—	—	—	1,621	1,902	—
Hungary	—	—	—	—	—	—	—	—	—	1,709	—
Iceland	—	—	—	—	—	—	—	—	—	3,609	—
Ireland	2,146	2,295	2,410	2,273	2,272	2,267	2,355	2,801	2,544	3,142	46.4
Italy	3,657	3,920	4,158	4,404	4,590	4,755	—	4,899	—	4,562	24.7
Japan	—	3,039	3,047	3,117	3,210	3,269	3,474	3,638	—	3,881	—
Korea	—	—	—	—	—	—	—	—	—	1,528	—
Luxembourg	—	6,926	7,728	8,046	8,424	—	—	—	—	—	—
Mexico	—	—	—	—	—	—	—	—	—	1,222	—
Netherlands	4,291	4,620	4,927	4,724	4,749	4,778	—	3,988	—	3,974	-7.4
New Zealand	—	3,586	3,227	3,154	3,531	3,478	3,187	3,707	—	3,676	—
Norway	4,526	5,139	5,421	5,593	5,676	5,396	5,675	6,707	—	6,496	43.5
Poland	—	—	—	—	—	—	—	—	—	—	—
Portugal	—	—	—	2,054	—	—	2,477	—	2,846	2,812	—
Russia[3]	—	—	—	—	—	—	—	—	—	—	—
Spain	1,636	1,674	1,793	2,002	2,223	2,374	2,546	2,581	2,589	2,735	67.1
Sweden	—	6,226	6,342	6,355	6,153	6,486	6,857	6,016	6,504	5,779	—
Switzerland	5,973	6,303	6,303	6,558	—	—	7,346	7,298	7,551	7,370	23.4
Turkey	—	—	—	—	—	—	—	—	948	885	—
United Kingdom	4,252	4,378	4,610	3,997	4,174	4,391	4,466	4,216	4,249	4,207	-1.0
United States	5,001	5,319	5,484	5,600	5,611	6,093	6,232	5,741	5,676	5,568	11.3
Average[4]	3,954	4,082	4,276	4,304	4,399	4,524	4,663	4,590	4,619	4,681	25.2

— No data were reported or data were incomplete or inconsistent.

[1]Percent change between 1985 and 1994.

[2]Pre-1991 numbers refer to Western Germany (Federal Republic of Germany before unification).

[3]Not an OECD member country.

[4]Average is for countries reporting data for all years included in the table.

NOTE: Countries in bold are G-7 countries. Because the finance survey form was modified in 1992, pre-1992 figures also include transfers and payments to private entities, and thus are not strictly comparable to later figures (see supplemental notes and tables). Refer to the supplemental notes for a description of how expenditures per student are converted to constant (1995) U.S. dollars. Direct public expenditure on educational services includes both amounts spent directly by governments to hire educational personnel and to procure other resources, and amounts provided by governments to public or private institutions.

SOURCE: Organization for Economic Co-operation and Development (OECD), Education Database, 1998.

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Table 9-2.—Direct public expenditures per student (in 1995 U.S. dollars) in public and private primary schools: 1985–1994

Country	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1985–94 change[1]
Australia	$2,914	$2,781	$2,801	$2,736	—	—	—	—	$2,716	$2,870	-1.5
Austria	3,746	3,812	3,903	3,861	$3,799	$3,842	$3,993	$4,358	4,232	—	—
Belgium	2,426	2,410	2,336	2,286	2,305	2,312	2,397	2,694	3,111	3,442	41.9
Canada	—	—	—	—	—	—	—	—	—	—	—
Czech Republic	—	—	—	—	—	—	—	—	—	1,747	—
Denmark	4,024	4,033	—	—	—	4,775	—	4,491	4,957	5,027	24.9
Finland	—	—	—	—	—	—	—	4,331	4,304	4,028	—
France	—	—	—	—	2,760	2,775	2,874	3,058	—	3,229	—
Germany[2]	3,139	3,207	3,131	3,140	—	—	—	—	3,005	3,380	7.7
Greece	—	—	—	—	—	—	—	—	1,538	1,883	—
Hungary	—	—	—	—	—	—	—	—	—	1,595	—
Iceland	—	—	—	—	—	—	—	—	—	2,658	—
Ireland	1,458	1,533	1,627	1,535	1,555	1,529	1,605	1,949	1,767	2,174	49.1
Italy	2,815	2,901	3,245	3,419	3,790	3,704	—	4,221	—	4,154	47.6
Japan	—	2,860	2,960	3,129	—	—	—	3,830	—	4,185	—
Korea	—	—	—	—	—	—	—	—	—	1,893	—
Luxembourg	—	6,000	6,822	6,824	6,859	—	—	—	—	—	—
Mexico	—	—	—	—	—	—	—	—	—	852	—
Netherlands	3,278	3,383	3,316	3,244	3,206	3,130	—	2,879	—	2,966	-9.5
New Zealand	—	2,887	2,504	2,339	2,786	2,572	2,324	2,214	—	2,623	—
Norway	3,671	4,199	4,601	4,703	4,577	4,179	4,291	5,007	—	—	—
Poland	—	—	—	—	—	—	—	—	—	—	—
Portugal	—	1,388	1,519	1,766	—	—	2,195	—	2,490	—	—
Russia[3]	—	—	—	—	—	—	—	—	—	—	—
Spain	1,407	1,413	1,465	1,616	1,765	1,760	1,926	2,091	2,093	2,315	64.5
Sweden	—	5,536	5,742	5,980	5,716	5,746	6,091	5,227	5,128	5,172	—
Switzerland[4]	10,880	11,386	11,519	11,741	—	—	6,038	5,023	6,251	6,102	-43.9
Turkey	—	—	—	—	—	—	—	—	870	718	—
United Kingdom	2,522	2,790	2,978	2,593	2,702	2,847	2,942	3,274	3,461	3,488	38.3
United States	4,014	4,291	4,537	4,632	4,925	4,894	5,086	5,256	5,233	4,669	16.3
Average[5]	2,365	2,487	2,589	2,532	2,650	2,668	2,791	3,053	3,133	3,218	42.0

— No data were reported or data were incomplete or inconsistent.

[1]Percent change between 1985 and 1994.

[2]Pre-1991 numbers refer to Western Germany (Federal Republic of Germany before unification).

[3]Not an OECD member country.

[4]Allocation of expenditures by level revised in 1991.

[5]Average is for countries reporting data for all years included in the table.

NOTE: Countries in bold are G-7 countries. Because the finance survey form was modified in 1992, pre-1992 figures also include transfers and payments to private entities, and thus are not strictly comparable to later figures (see supplemental notes and tables). Refer to the supplemental notes for a description of how expenditures per student are converted to constant (1995) U.S. dollars. Direct public expenditure on educational services includes both amounts spent directly by governments to hire educational personnel and to procure other resources, and amounts provided by governments to public or private institutions.

SOURCE: Organization for Economic Co-operation and Development (OECD), Education Database, 1998.

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Table 9-3.—Direct public expenditures per student (in 1995 U.S. dollars) in public and private secondary schools: 1985–1994

Country	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1985–94 change[1]
Australia	$4,091	$3,039	$2,991	$2,893	—	—	$4,115	$6,452	$4,229	$4,290	4.9
Austria	4,282	4,402	4,605	4,703	$4,839	$5,046	5,230	5,637	5,294	—	—
Belgium	5,594	5,493	5,226	5,243	—	—	5,581	5,609	5,688	5,951	6.4
Canada	—	—	—	—	—	—	—	—	—	—	—
Czech Republic	—	—	—	—	—	—	—	—	—	2,403	—
Denmark	5,680	5,483	—	—	—	5,695	—	5,724	6,811	6,829	20.2
Finland	—	—	—	—	—	—	—	5,039	5,023	4,660	—
France	—	—	—	—	4,616	4,821	5,108	5,521	—	5,526	—
Germany[2]	3,436	3,624	3,734	3,974	—	—	—	—	4,637	4,321	25.8
Greece	—	—	—	—	—	—	—	—	1,575	1,853	—
Hungary	—	—	—	—	—	—	—	—	—	1,517	—
Iceland	—	—	—	—	—	—	—	—	—	3,392	—
Ireland	2,509	2,596	2,780	2,656	2,678	2,574	2,643	3,071	2,870	3,574	42.4
Italy	3,618	3,943	4,104	4,235	4,375	4,292	—	4,960	—	4,965	37.2
Japan	—	3,068	2,959	2,939	—	—	—	3,489	—	4,227	—
Korea	—	—	—	—	—	—	—	—	—	1,296	—
Luxembourg	—	6,564	7,232	7,808	8,434	—	—	—	—	—	—
Mexico	—	—	—	—	—	—	—	—	—	1,463	—
Netherlands	3,844	4,134	4,505	4,406	4,418	4,542	—	3,474	—	3,953	2.9
New Zealand	—	1,980	1,685	1,769	2,119	2,139	1,907	2,810	—	4,108	—
Norway	5,014	5,487	5,739	5,885	5,856	5,319	5,684	7,009	—	—	—
Poland	—	—	—	—	—	—	—	—	—	—	—
Portugal	—	1,797	1,886	1,846	—	—	2,381	—	2,536	2,709	—
Russia[3]	—	—	—	—	—	—	—	—	—	—	—
Spain	1,943	1,971	2,088	2,339	2,554	2,671	2,808	2,748	2,816	2,979	53.3
Sweden	—	—	—	—	—	—	—	—	5,890	5,774	—
Switzerland[4]	2,948	3,183	3,127	3,388	—	—	7,018	7,912	7,889	7,794	164.4
Turkey	—	—	—	—	—	—	—	—	627	516	—
United Kingdom	3,559	4,115	4,362	3,861	4,088	4,395	4,385	4,497	4,551	4,419	24.2
United States	5,049	5,349	5,475	5,598	5,828	6,283	6,434	6,220	6,158	5,993	18.7
Average[5]	—	—	—	—	—	—	—	—	—	—	—

— No data were reported or data were incomplete or inconsistent.

[1]Percent change between 1985 and 1994.

[2]Pre-1991 numbers refer to Western Germany (Federal Republic of Germany before unification).

[3]Not an OECD member country.

[4]Allocation of expenditures by level revised in 1991.

[5]Not enough countries reporting data for all years to compute reliable average.

NOTE: Countries in bold are G-7 countries. Because the finance survey form was modified in 1992, pre-1992 figures also include transfers and payments to private entities, and thus are not strictly comparable to later figures (see supplemental notes and tables). Refer to the supplemental notes for a description of how expenditures per student are converted to constant (1995) U.S. dollars. Direct public expenditure on educational services includes both amounts spent directly by governments to hire educational personnel and to procure other resources, and amounts provided by governments to public or private institutions.

SOURCE: Organization for Economic Co-operation and Development (OECD), Education Database, 1998.

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Table 9-4.—Direct public expenditures per student (in 1995 U.S. dollars) for public and private higher education institutions: 1985–1994

Country	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1985–94 change[1]
Australia	—	$13,353	$13,015	$12,206	—	—	$11,614	$7,935	$5,974	$6,774	—
Austria	$7,120	7,986	7,536	7,440	$7,302	$6,938	7,198	6,975	7,461	—	—
Belgium	7,714	7,862	7,511	7,200	7,023	6,701	6,975	5,060	6,836	6,773	-12.2
Canada	8,944	8,947	9,902	9,909	10,029	10,182	9,683	8,943	7,562	7,701	-13.9
Czech Republic	—	—	—	—	—	—	—	—	—	5,157	—
Denmark	9,271	9,485	9,064	9,519	9,631	9,042	8,585	8,015	8,551	8,800	-5.1
Finland	—	—	—	—	—	—	—	8,823	7,773	6,293	—
France	—	—	—	—	5,332	5,244	5,286	5,389	—	4,959	—
Germany[2]	7,558	7,624	7,469	7,599	—	—	—	—	7,118	7,269	-3.8
Greece	—	—	—	—	—	—	—	—	2,687	2,886	—
Hungary	—	—	—	—	—	—	—	—	—	4,245	—
Iceland	—	—	—	—	—	—	—	—	—	4,950	—
Ireland	5,701	6,058	6,780	5,983	5,653	5,918	5,824	6,254	5,045	5,745	0.8
Italy	5,084	5,885	6,283	6,591	6,057	7,772	—	5,985	—	4,328	-14.9
Japan	—	2,870	2,816	2,856	—	—	—	2,548	—	3,605	—
Korea	—	—	—	—	—	—	—	—	—	—	—
Luxembourg	—	17,780	17,890	16,821	18,699	—	—	—	—	—	—
Mexico	—	—	—	—	—	—	—	—	—	4,512	—
Netherlands	10,489	11,204	12,629	10,971	11,039	11,166	—	8,506	—	7,517	-28.3
New Zealand	—	12,089	10,301	10,014	9,872	13,065	8,895	6,780	—	5,332	—
Norway	7,170	8,634	8,127	8,417	8,946	7,923	8,000	8,610	—	8,412	17.3
Poland	—	—	—	—	—	—	—	—	—	—	—
Portugal	—	4,678	5,312	5,984	5,847	—	5,081	—	4,023	3,684	—
Russia[3]	—	—	—	—	—	—	—	—	—	—	—
Spain	2,019	2,126	2,444	2,620	2,938	3,341	3,535	3,363	3,079	2,977	47.5
Sweden	—	8,423	8,648	9,109	8,092	9,444	9,528	7,770	—	—	—
Switzerland	14,374	14,948	14,377	14,457	—	—	15,766	15,168	15,281	14,572	1.4
Turkey	—	—	—	—	—	—	—	—	3,014	3,377	—
United Kingdom	14,064	13,197	13,138	10,850	10,875	10,707	10,642	8,206	6,301	5,890	-58.1
United States	8,039	8,716	8,828	8,946	7,711	9,537	9,683	7,384	6,804	7,518	-6.5
Average[4]	7,964	8,056	8,238	7,861	7,694	7,918	7,847	6,746	6,311	6,486	-6.8

— No data were reported or data were incomplete or inconsistent.

[1]Percent change between 1985 and 1994.

[2]Pre-1991 numbers refer to Western Germany (Federal Republic of Germany before unification).

[3]Not an OECD member country.

[4]Average is for countries reporting data for all years included in the table.

NOTE: Countries in bold are G-7 countries. Because the finance survey form was modified in 1992, pre-1992 figures also include transfers and payments to private entities, and thus are not strictly comparable to later figures (see supplemental notes and tables). Refer to the supplemental notes for a description of how expenditures per student are converted to constant (1995) U.S. dollars. Direct public expenditure on educational services includes both amounts spent directly by governments to hire educational personnel and to procure other resources, and amounts provided by governments to public or private institutions.

SOURCE: Organization for Economic Co-operation and Development (OECD), Education Database, 1998.

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Indicator 10: Starting and maximum teacher salaries in public schools

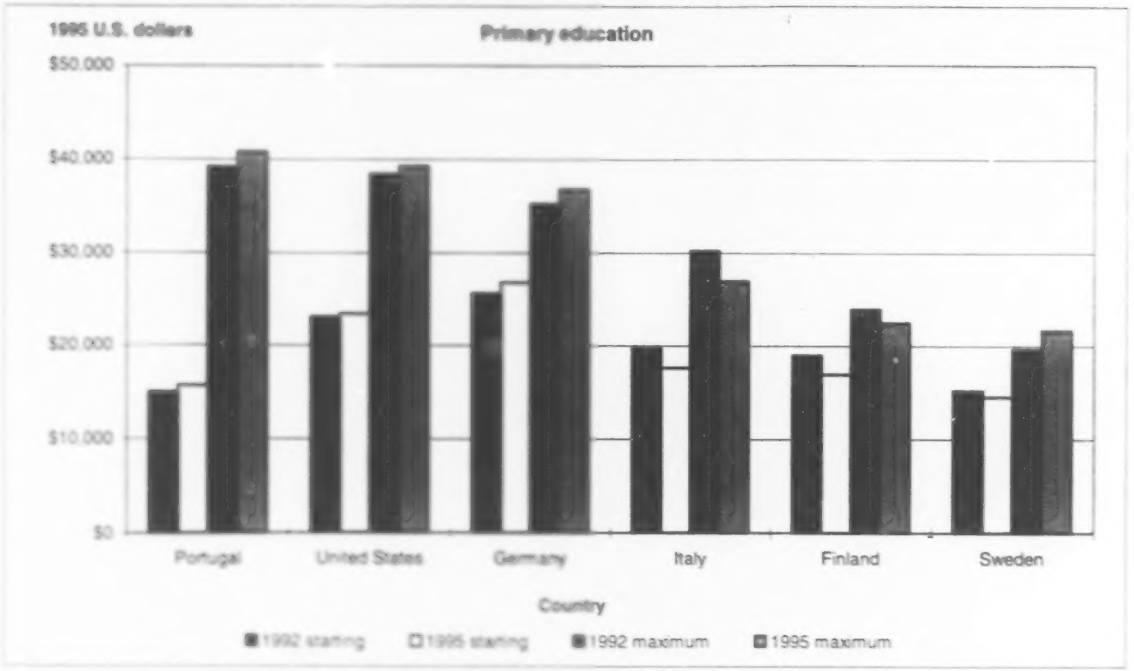
Teacher salaries are a measure of teachers' standard of living and reflect what society is willing to pay for the direct work of education. Expressed in constant 1995 U.S. dollars, they reflect the cost of teachers in an absolute sense, irrespective of a nation's wealth and the resources a country can devote to teaching. Because teachers are such an important link in the delivery of education, ensuring their quality and effectiveness is a priority of many countries. A key determinant of the supply and retention of qualified and effective teachers is the salary being paid both at the start of the career and at the top of the pay scale.

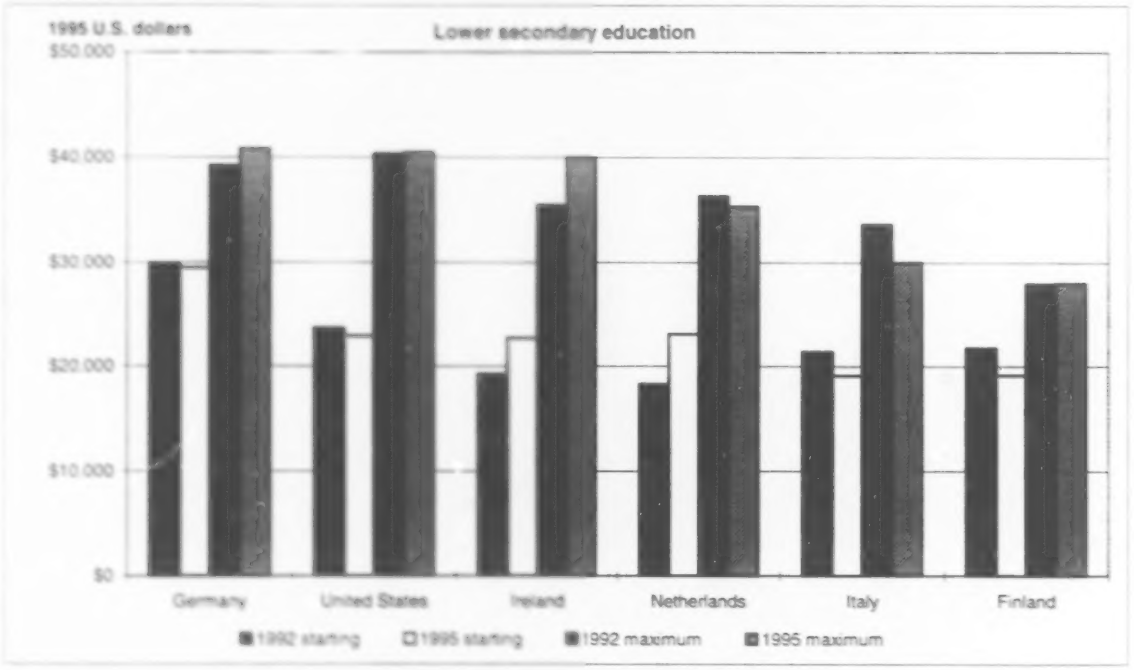
- The available data spanning the years 1992 through 1995 suggest that both starting and maximum teacher salaries at the primary and lower secondary levels ranged widely across OECD countries.

- On average, starting salaries at the primary level declined slightly while maximum salaries remained constant. The largest decline in primary teacher starting and maximum salaries between 1992 and 1995 occurred in Italy and Finland, dropping by slightly over 10 percent. In most countries, shifts in starting and maximum primary teacher salaries tended to co-vary (a decline in one was accompanied by a decline in the other), with the exception of Austria, Spain, and Sweden. In 1995, the United States had among the higher maximum primary teachers salaries among OECD countries, with Korea, Switzerland, and Portugal being higher, and Austria and Ireland being about the same.

- Teacher salaries at the lower secondary level tended to be slightly higher than those at the primary level. On average, starting salaries remained constant in real terms, while maximum salaries declined slightly between 1992 and 1995. The largest decline in lower secondary teacher starting and maximum salaries occurred in Italy, with a decline of about 10 percent. In contrast, in Ireland starting and maximum salaries grew by 18 and 13 percent, respectively. In 1995, the United States had among the higher maximum lower secondary teachers salaries among OECD countries, with Switzerland, Korea, and Austria being higher, and Germany and Portugal being about the same. The gap between starting and maximum salaries was highest in Korea.

Indicator 10.—Starting and maximum teacher salaries in public schools: 1992 and 1995





SOURCE: Organization for Economic Co-operation and Development (OECD), *Education at a Glance 1995 through 1997*.

Table 10-1.—Starting and maximum public primary teacher salaries in constant 1995 U.S. dollars: 1992, 1994, and 1995

Country	1992		1994		1995		1992-95 change[1]	
	Starting	Maximum	Starting	Maximum	Starting	Maximum	Starting	Maximum
Australia	—	—	—	—	—	—	—	—
Austria	$18,802	$42,322	$18,966	$35,103	$19,470	$39,240	3.6	-7.3
Belgium	19,043	31,047	19,951	32,155	19,590	31,650	2.9	1.9
Canada	—	—	—	—	—	—	—	—
Czech Republic	—	—	—	—	5,370	7,950	—	—
Denmark	—	—	22,407	28,892	22,490	28,990	—	—
Finland	18,989	23,947	17,027	22,704	16,980	22,480	-10.6	-6.1
France	—	—	19,020	35,559	18,910	35,360	—	—
Germany	25,665	35,264	26,958	37,006	26,820	36,790	4.5	4.3
Greece	—	—	12,421	19,257	13,120	20,700	—	—
Hungary	—	—	—	—	—	—	—	—
Iceland	—	—	—	—	—	—	—	—
Ireland	19,279	35,438	21,712	39,270	21,650	39,610	12.3	11.8
Italy	19,727	30,254	18,104	27,765	17,630	27,000	-10.6	-10.8
Japan	—	—	—	—	—	—	—	—
Korea	—	—	—	—	19,630	56,000	—	—
Luxembourg	—	—	—	—	—	—	—	—
Mexico	—	—	—	—	—	—	—	—
Netherlands	18,270	33,640	18,251	33,606	19,010	34,010	4.1	1.1
New Zealand	15,521	22,683	15,187	22,193	14,780	21,590	-4.8	-4.8
Norway	18,940	23,176	18,344	22,661	17,260	21,390	-8.9	-7.7
Poland	—	—	—	—	—	—	—	—
Portugal	14,973	39,190	15,975	41,418	15,690	40,810	4.8	4.1
Russia[2]	—	—	—	—	—	—	—	—
Spain	24,945	33,274	23,498	33,587	23,890	33,830	-4.2	1.7
Sweden	15,206	19,660	15,031	22,391	14,550	21,670	-4.3	10.2
Switzerland	—	—	31,437	48,332	31,550	48,590	—	—
Turkey	7,597	13,479	8,481	13,191	—	—	—	—
United Kingdom	17,978	37,020	—	—	—	—	—	—
United States	23,072	38,447	23,398	39,223	23,430	39,280	1.6	2.2
Average[3]	19,418	31,411	19,415	31,468	19,288	31,485	-0.8	0.1

— No data were reported or data were incomplete or inconsistent.

[1]Percent change between 1992 and 1995.

[2]Not an OECD member country.

[3]Average is for countries reporting data in 1992, 1994 and 1995.

NOTE: Countries in bold are G-7 countries. Refer to the supplemental notes for a description of how teacher salaries are converted to constant (1995) U.S. dollars.

SOURCE: Organization for Economic Co-operation and Development (OECD), *Education at a Glance 1995-1997*.

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Table 10-2.—Starting and maximum public lower secondary teacher salaries in constant 1995 U.S. dollars: 1992, 1994, and 1995

Country	1992		1994		1995		1992–95 change[1]	
	Starting	Maximum	Starting	Maximum	Starting	Maximum	Starting	Maximum
Australia	—	—	—	—	—	—	—	—
Austria	$20,003	$46,109	$20,103	$42,197	$20,140	$41,960	0.7	-9.0
Belgium	19,504	34,008	20,415	35,205	20,040	34,640	2.8	1.9
Canada	—	—	—	—	—	—	—	—
Czech Republic	—	—	—	—	5,370	7,950	—	—
Denmark	—	—	22,407	28,892	22,490	28,990	—	—
Finland	21,761	27,891	19,198	25,041	19,150	27,970	-12.0	0.3
France	—	—	21,828	38,410	21,580	38,190	—	—
Germany	29,811	39,234	29,575	41,008	29,450	40,800	-1.2	4.0
Greece	—	—	12,421	19,257	13,120	20,700	—	—
Hungary	—	—	—	—	—	—	—	—
Iceland	—	—	—	—	—	—	—	—
Ireland	19,279	35,438	22,763	39,636	22,720	39,980	17.9	12.8
Italy	21,408	33,594	19,646	30,830	19,130	29,980	-10.6	-10.8
Japan	—	—	—	—	—	—	—	—
Korea	—	—	—	—	19,720	56,090	—	—
Luxembourg	—	—	—	—	—	—	—	—
Mexico	—	—	—	—	—	—	—	—
Netherlands	18,309	36,339	18,292	36,307	23,090	35,340	26.1	-2.7
New Zealand	16,411	23,843	16,216	23,149	15,780	22,750	-3.8	-4.6
Norway	18,940	23,176	18,344	22,661	17,260	21,390	-8.9	-7.7
Poland	—	—	—	—	—	—	—	—
Portugal	14,973	39,190	15,975	41,418	15,690	40,810	4.8	4.1
Russia[2]	—	—	—	—	—	—	—	—
Spain	24,945	33,274	23,498	33,587	23,890	33,830	-4.2	1.7
Sweden	17,053	21,397	16,741	22,391	16,200	21,670	-5.0	1.3
Switzerland	—	—	37,118	56,901	37,090	56,880	—	—
Turkey	7,661	13,479	6,933	11,643	—	—	—	—
United Kingdom	17,978	42,645	—	—	—	—	—	—
United States	23,666	40,350	22,896	40,406	22,930	40,470	-3.1	0.3
Average[3]	20,786	33,365	20,511	33,387	20,669	33,244	-0.1	-0.5

— No data were reported or data were incomplete or inconsistent.
[1]Percent change between 1992 and 1995.
[2]Not an OECD member country.
[3]Average is for countries reporting data in 1992, 1994 and 1995.
NOTE: Countries in bold are G-7 countries. Refer to the supplemental notes for a description of how teacher salaries are converted to constant (1995) U.S. dollars.
SOURCE: Organization for Economic Co-operation and Development (OECD). *Education at a Glance 1995–1997*.

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Indicator 11: Teaching staff as a percentage of the total labor force

The percentage of the labor force that is employed as public and private school and college teachers is an indicator of the proportion of a country's human resources spent on educating the population. In general, the greater the proportion of the labor force engaged in teaching, the greater the proportion of financial resources a country must devote to education. Therefore, shifts in the proportion of teaching staff over time often indicate changes in resources allocated to education. In addition, a comparison of the proportion of teaching staff across OECD countries reflects differences in levels of emphasis put on education and differences in the relative proportion of young people enrolled at various school ages.

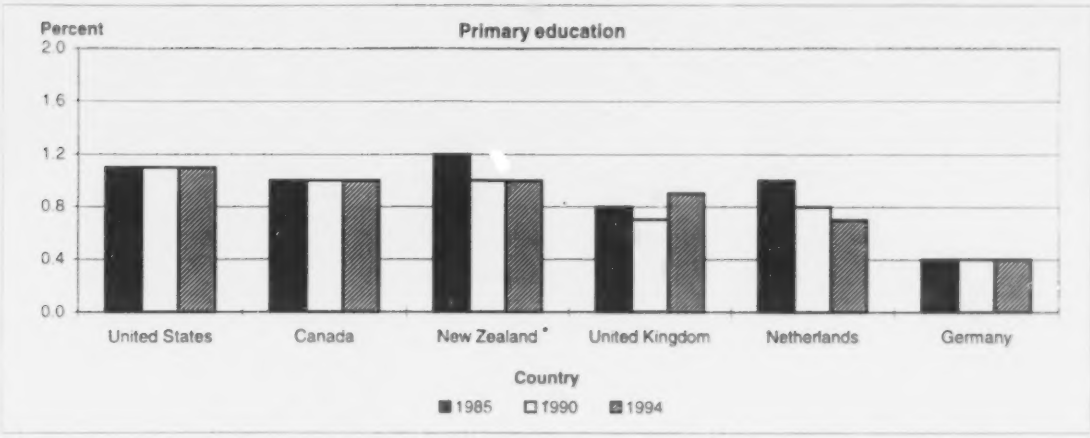
- Overall, the percentage of the labor force working as teachers increased in almost every OECD country for which data are available between 1985 and 1994, with the exception of the Netherlands and Japan. While in most countries the increase was modest, teaching staff grew by .9 percentage points in Finland and by .7 percentage points in Denmark. In 1994, Hungary and Italy had the highest proportion of teachers (above 4 percent of the labor force) and Korea and Turkey the lowest.

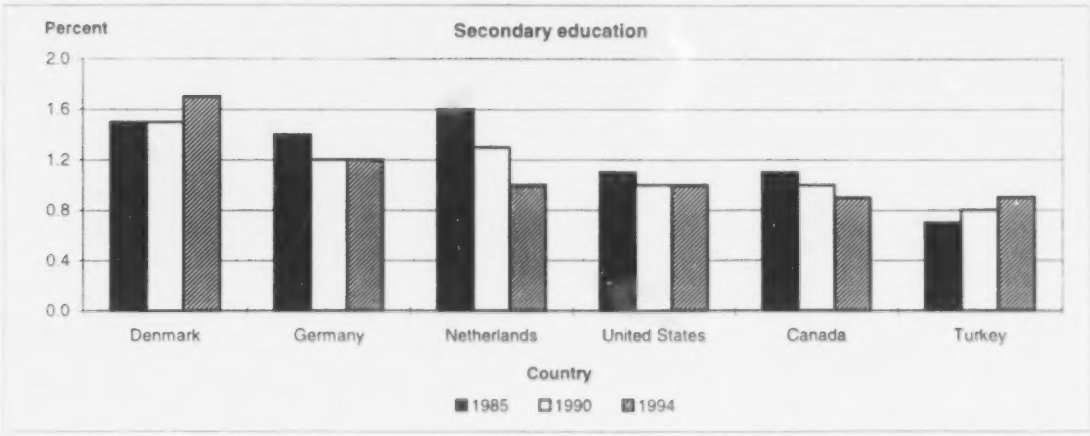
- The percentage of primary education teaching staff remained stable or declined slightly in the majority of OECD countries reporting data between 1985 and 1994. The biggest declines occurred in the Netherlands and New Zealand. The United Kingdom was the only country to report a slight increase. Germany had the smallest proportion of primary teachers. In most countries, roughly about 1 percent of the labor force is engaged in teaching at the primary level.

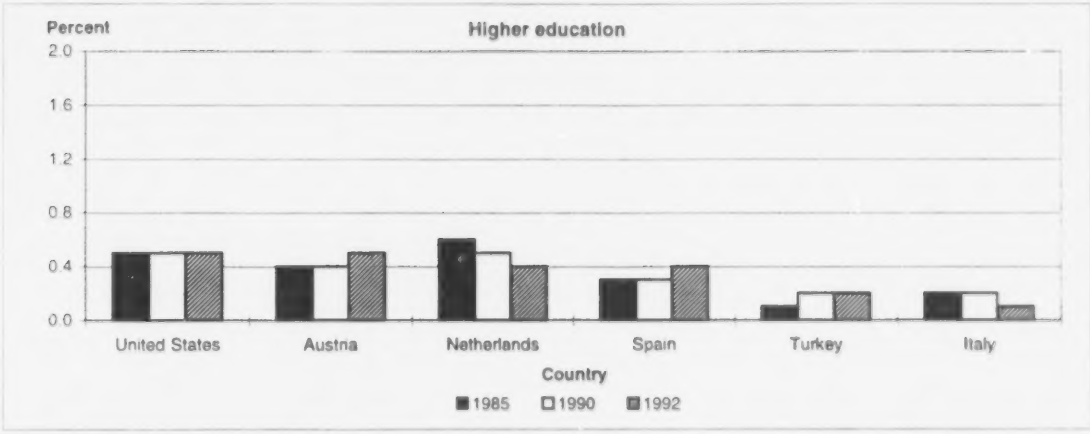
- Many of the countries for which data are available experienced modest increases in their proportion of secondary education teachers between 1985 and 1994. Seven of the 13 reporting countries had increases, while 1 had no change and 5 had decreases. The Netherlands, Germany, Austria, and Canada saw the largest reductions in their proportion of secondary education teachers. Between 1985 and 1994, the United States had one of the lowest percentages of the labor force employed as secondary education teachers.

- Between 1985 and 1992, the only years for which data were available, the proportion of the labor force engaged in teaching in higher education remained fairly stable in most countries. Higher education teachers constitute the smallest group of teachers in every OECD country. Despite the fact that it doubled its population of higher education staff between 1985 and 1992, Turkey continued to have the lowest proportion of higher education teachers in 1992.

Indicator 11.—Teaching staff as a percentage of the total labor force: 1985, 1990, and 1994







*Data are from 1985, 1989, and 1994.

NOTE: Higher education data are from 1985, 1990, and 1992.

SOURCE: Organization for Economic Co-operation and Development (OECD), *Labour Force Statistics 1976-1996*, 1997; Organization for Economic Co-operation and Development (OECD), Education Database, 1998.

Table 11-1.—Teaching staff (FTE) as a percentage of the total labor force: 1985–1994

Country	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1985–94 change[1]
Australia	—	—	—	—	—	—	3.0	2.7	—	—	—
Austria	3.7	3.8	3.8	3.8	3.8	3.8	3.7	3.8	—	3.8	0.1
Belgium	—	—	—	—	—	—	5.1	4.8	4.9	—	—
Canada	—	—	2.1	—	—	—	—	—	2.7	2.7	—
Czech Republic	—	—	—	—	—	—	4.3	3.4	3.0	3.1	—
Denmark	3.0	3.0	3.0	3.0	3.0	2.9	2.8	3.3	3.5	3.7	0.7
Finland	2.5	2.5	2.6	2.6	2.7	2.7	2.8	3.1	—	3.4	0.9
France	—	—	—	—	—	—	—	3.3	3.4	3.4	—
Germany[2]	—	—	—	—	—	—	—	—	2.6	2.6	—
Greece	—	—	—	—	—	—	—	—	1.2	3.3	—
Hungary	—	—	—	—	—	—	—	4.1	—	4.8	—
Iceland	—	—	—	—	—	—	—	—	—	—	—
Ireland	—	—	3.6	3.6	3.6	3.5	3.5	3.5	3.6	3.6	—
Italy	4.2	4.1	4.1	4.2	4.2	4.2	—	4.2	—	4.6	0.4
Japan	2.5	2.5	2.4	2.4	2.4	2.4	2.4	2.4	—	2.3	-0.2
Korea	—	—	—	—	—	—	—	—	2.1	2.1	—
Luxembourg	—	—	—	—	—	—	—	—	—	—	—
Mexico	—	—	—	—	—	—	—	—	3.6	3.5	—
Netherlands	3.5	3.5	3.2	3.1	3.0	2.8	2.8	2.4	—	2.5	-1.0
New Zealand	—	—	—	—	—	—	—	—	—	3.2	—
Norway	—	—	—	—	—	—	—	—	—	—	—
Poland	—	—	—	—	—	—	—	—	—	—	—
Portugal	—	—	—	—	—	—	3.6	—	4.9	3.8	—
Russia[3]	—	—	—	—	—	—	—	—	—	—	—
Spain	3.1	3.1	3.0	3.0	3.1	3.2	3.3	3.3	3.4	3.4	0.3
Sweden	—	—	—	—	—	—	—	—	—	—	—
Switzerland	—	—	—	—	—	—	—	—	—	—	—
Turkey	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	—	2.2	0.2
United Kingdom	—	—	—	2.2	2.4	2.4	2.4	2.4	2.4	2.4	—
United States	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.7	2.7	2.7	0.1
Average[4]	—	—	—	—	—	—	—	—	—	—	—

— = No data were reported or data were incomplete or inconsistent.

[1]Percentage points change between 1985 and 1994.

[2]Pre-1991 numbers refer to Western Germany (Federal Republic of Germany before unification).

[3]Not an OECD member country.

[4]Not enough countries reporting data for all years to compute reliable average.

NOTE: Countries in bold are G-7 countries. "FTE" stands for "full-time equivalent." See glossary for definition. Percentages include pre-primary education.

SOURCE: Organization for Economic Co-operation and Development (OECD). Education Database, 1998; Organization for Economic Co-operation and Development (OECD). *Labour Force Statistics 1976–96*, 1997.

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Table 11-2.—Primary education teaching staff (FTE) as a percentage of the total labor force: 1985–1994

Country	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1985–94 change[1]
Australia	—	—	—	—	—	—	1.1	1.1	1.1	1.1	—
Austria	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8	—	0.8	-0.1
Belgium	—	—	—	—	—	—	1.8	1.3	1.3	—	—
Canada	1.0	0.9	0.9	1.0	1.0	1.0	—	—	1.0	1.0	0.0
Czech Republic	—	—	—	—	—	—	0.9	0.5	0.5	0.5	—
Denmark	1.2	1.2	1.2	1.1	1.0	1.1	1.1	1.0	1.0	1.1	-0.1
Finland	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	—	—	—
France	—	—	—	—	—	—	0.7	0.8	0.8	0.8	—
Germany[2]	0.4	0.4	0.4	0.4	0.4	0.4	—	—	0.4	0.4	0.0
Greece	—	—	—	—	—	—	—	—	1.0	1.0	—
Hungary	—	—	—	—	—	—	—	0.9	—	1.2	—
Iceland	—	—	—	—	—	—	—	—	—	—	—
Ireland	—	—	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.1	—
Italy	1.3	1.2	1.2	1.2	1.2	1.2	1.1	1.1	—	1.2	-0.1
Japan	—	—	—	—	0.7	0.7	0.7	0.7	—	0.7	—
Korea	—	—	—	—	—	—	—	—	0.7	0.6	—
Luxembourg	—	—	—	—	—	—	—	—	—	—	—
Mexico	—	—	—	—	—	—	—	—	1.5	1.5	—
Netherlands	1.0	1.1	0.9	0.9	0.9	0.8	0.8	0.7	—	0.7	-0.3
New Zealand	1.2	—	1.0	1.0	1.0	—	—	1.0	—	1.0	-0.2
Norway	—	—	—	—	—	—	—	—	—	—	—
Poland	—	—	—	—	—	—	—	—	—	—	—
Portugal	—	—	—	—	—	—	1.6	—	1.5	1.6	—
Russia[3]	—	—	—	—	—	—	—	—	—	—	—
Spain	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	-0.1
Sweden	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.1	1.2	1.2	0.0
Switzerland	—	—	—	—	—	—	—	—	—	—	—
Turkey	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	—	1.1	0.0
United Kingdom	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.8	0.9	0.9	0.1
United States	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	0.0
Average[4]	—	—	—	—	—	—	—	—	—	—	—

— No data were reported or data were incomplete or inconsistent.

[1]Percentage points change between 1985 and 1994.

[2]Pre-1991 numbers refer to Western Germany (Federal Republic of Germany before unification).

[3]Not an OECD member country.

[4]Not enough countries reporting data for all years to compute reliable average.

NOTE: Countries in bold are G-7 countries. "FTE" stands for "full-time equivalent." See glossary for definition.

SOURCE: Organization for Economic Co-operation and Development (OECD), Education Database, 1998; Organization for Economic Co-operation and Development (OECD), *Labour Force Statistics 1976–96*, 1997.

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Table 11-3.—Secondary education teaching staff (FTE) as a percentage of the total labor force: 1985–1994

Country	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1985–94 change[1]
Australia	—	—	—	—	—	—	—	—	—	—	—
Austria	2.2	2.3	2.3	2.3	2.3	2.2	2.2	2.2	—	2.1	-0.1
Belgium	—	—	—	—	—	—	2.5	—	2.6	—	—
Canada	1.1	1.1	1.1	1.0	1.0	1.0	2.2	—	0.9	0.9	-0.2
Czech Republic	—	—	—	—	—	—	2.0	1.9	1.6	1.8	—
Denmark	1.5	1.5	1.5	1.5	1.6	1.5	1.5	1.6	1.6	1.7	0.2
Finland	—	—	—	—	—	—	—	—	—	—	—
France	—	—	—	—	—	—	1.6	—	1.7	1.7	—
Germany[2]	1.4	1.3	1.3	1.3	1.2	1.2	—	—	1.2	1.2	-0.2
Greece	—	—	—	—	—	—	—	—	—	1.7	—
Hungary	—	—	—	—	—	—	—	2.1	—	2.4	—
Iceland	—	—	—	—	—	—	—	—	—	—	—
Ireland	1.5	1.6	1.6	1.6	1.5	1.5	1.6	—	1.6	1.7	0.2
Italy	2.3	2.3	2.3	2.4	2.4	2.4	2.3	2.4	—	2.5	0.2
Japan	—	—	—	—	1.0	1.0	1.0	1.0	—	1.0	—
Korea	—	—	—	—	—	—	—	—	1.0	0.9	—
Luxembourg	—	—	—	—	—	—	—	—	—	—	—
Mexico	—	—	—	—	—	—	—	—	1.2	1.3	—
Netherlands	1.6	1.5	1.5	1.4	1.4	1.3	1.2	—	—	1.0	-0.6
New Zealand	1.4	—	1.2	1.2	1.2	—	—	—	—	1.4	0.0
Norway	—	—	—	—	—	—	—	—	—	—	—
Poland	—	—	—	—	—	—	—	—	—	—	—
Portugal	—	—	—	—	—	—	1.5	—	3.0	1.5	—
Russia[3]	—	—	—	—	—	—	—	—	—	—	—
Spain	1.6	1.7	1.6	1.6	1.7	1.8	1.8	1.8	1.8	1.8	0.2
Sweden	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.3	0.1
Switzerland	—	—	—	—	—	—	—	—	—	—	—
Turkey	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	—	0.9	0.2
United Kingdom	1.1	1.4	1.3	1.3	1.3	1.2	1.2	1.3	1.3	1.3	0.2
United States	1.1	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	-0.1
Average[4]	—	—	—	—	—	—	—	—	—	—	—

— No data were reported or data were incomplete or inconsistent.

[1]Percentage points change between 1985 and 1994.

[2]Pre-1991 numbers refer to Western Germany (Federal Republic of Germany before unification).

[3]Not an OECD member country.

[4]Not enough countries reporting data for all years to compute reliable average.

NOTE: Countries in bold are G-7 countries. "FTE" stands for "full-time equivalent." See glossary for definition.

SOURCE: Organization for Economic Co-operation and Development (OECD), Education Database, 1998; Organization for Economic Co-operation and Development (OECD), *Labour Force Statistics 1976-96*, 1997.

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Table 11-4.—Higher education teaching staff (FTE) as a percentage of the total labor force: 1985–1992

Country	1985	1986	1987	1988	1989	1990	1991	1992	1985–92 change[1]
Australia	—	—	—	—	—	—	0.6	0.6	—
Austria	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.1
Belgium	—	—	—	—	—	—	0.4	0.3	—
Canada	—	—	—	—	—	—	—	—	—
Czech Republic	—	—	—	—	—	—	0.4	0.3	—
Denmark	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.0
Finland	—	—	—	—	—	—	—	—	—
France	—	—	—	—	—	—	—	0.4	—
Germany[2]	0.5	0.5	0.5	0.5	0.5	0.5	—	—	—
Greece	—	—	—	—	—	—	—	—	—
Hungary	—	—	—	—	—	—	—	0.4	—
Iceland	—	—	—	—	—	—	—	—	—
Ireland	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.0
Italy	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	-0.1
Japan	—	—	—	—	0.4	0.4	0.4	0.4	—
Korea	—	—	—	—	—	—	—	—	—
Luxembourg	—	—	—	—	—	—	—	—	—
Mexico	—	—	—	—	—	—	—	—	—
Netherlands	0.6	0.6	0.5	0.5	0.5	0.5	0.4	0.4	-0.2
New Zealand	—	—	—	—	—	—	—	0.5	—
Norway	—	—	—	—	—	—	—	—	—
Poland	—	—	—	—	—	—	—	—	—
Portugal	—	—	—	—	—	—	0.3	—	—
Russia[3]	—	—	—	—	—	—	—	—	—
Spain	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.1
Sweden	—	—	—	—	—	—	—	—	—
Switzerland	—	—	—	—	—	—	—	—	—
Turkey	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1
United Kingdom	—	—	—	0.3	0.3	0.2	0.3	0.3	—
United States	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0
Average[4]	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.0

— No data were reported or data were incomplete or inconsistent.

[1]Percentage points change between 1985 and 1992.

[2]Pre-1991 numbers refer to Western Germany (Federal Republic of Germany before unification).

[3]Not an OECD member country.

[4]Average is for countries reporting data for all years included in the table.

NOTE: Countries in bold are G-7 countries. "FTE" stands for "full-time equivalent." See glossary for definition.

SOURCE: Organization for Economic Co-operation and Development (OECD). Education Database. 1998. Organization for Economic Co-operation and Development (OECD). *Labour Force Statistics 1976–96*. 1997.

Indicator 12: Ratio of students to teaching staff

The ratio of students to teaching staff in both the public and private sectors is an important indicator of the resources countries devote to education. In addition, because of the difficulty in measuring quality in education, the student/teacher ratio is often used as one measure. Low student/teacher ratios are seen as beneficial to students in that they tend to offer greater opportunity for one-on-one attention between teachers and students. Low student/teacher ratios also indicate a large financial allocation for education on the part of countries. Low student/teacher ratios might also mean a trade-off in terms of teaching staff and salaries. In periods of declining enrollment, a policy decision to maintain existing staffing levels will result in declining student/teacher ratios. Therefore, changes in student/teacher ratios over time might reflect changes in enrollment, financial allocations to education, or specific policies to change student/teacher ratios.

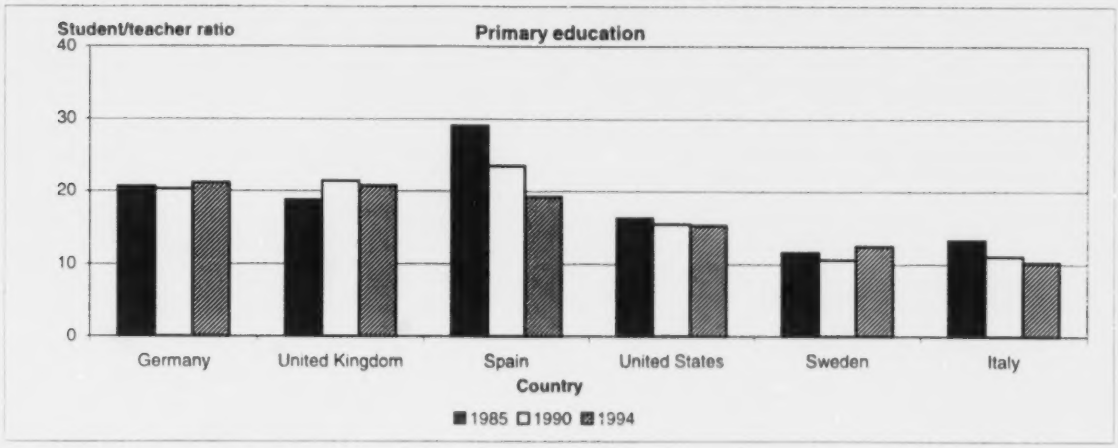
- In almost every country for which data are available, the ratio of students to teaching staff declined between 1985 and 1994, suggesting either an increase in the number of teachers, a decrease in the number of students, or a combination of both. Countries like Finland and Spain observed substantial decreases in their student/teacher ratio, from 19 to 13 and from 22 to 18 respectively. Most of the reductions in student/teacher ratios occurred at the secondary level. Across all levels of education, Turkey had the highest ratio of students to teaching staff, and Italy the lowest.

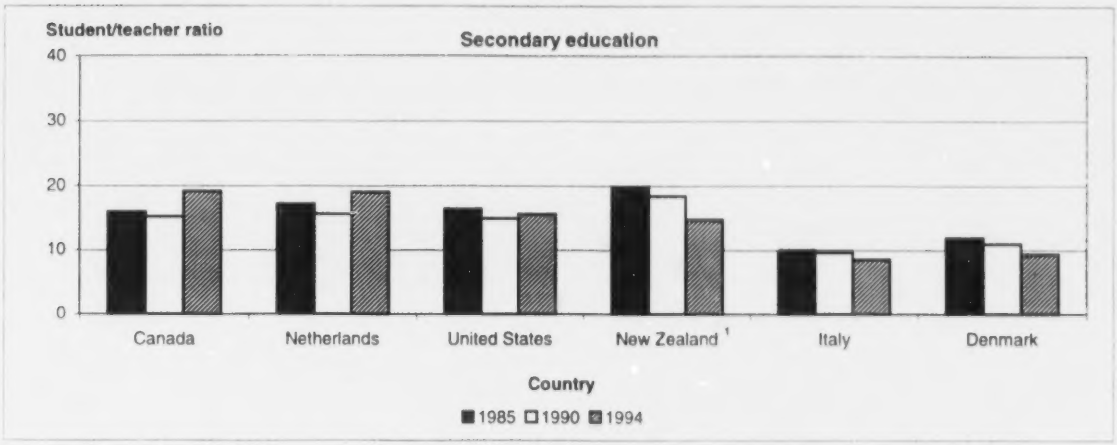
- At the primary level, the student/teacher ratio increased in six countries, and decreased in six others between 1985 and 1994. The biggest decreases at the primary level occurred in Spain at 10 percentage points, while the largest increase took place in the United Kingdom at 2 percentage points. The United States observed a small decrease in its ratio of students to primary teachers between 1985 and 1994. In 1994, among G-7 countries, the United States had the second smallest ratio after Italy.

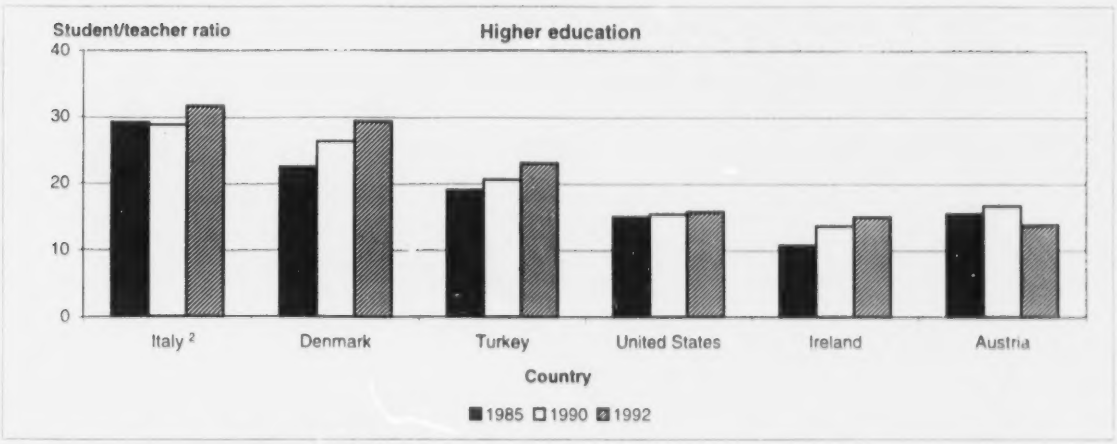
- The ratio of students to teaching staff at the secondary level decreased noticeably for the majority of countries reporting data between 1985 and 1994. The largest decreases occurred in New Zealand and Denmark, at 5 and 3 percentage points respectively. In contrast, Canada and the Netherlands reported increases of 3 and 2 percentage points, respectively. Between 1985 and 1994, the United States posted a slight decrease in its student/teacher ratio at the secondary level. By 1994, the United States had the third smallest ratio among G-7 countries after Italy and France.

- Higher education saw an increase in the ratio of students to teaching staff in five of the six countries reporting data between 1985 and 1992. Austria was the only reporting country in which the ratio of students to teaching staff decreased. In Denmark, Ireland, and Turkey, the increases were of more than 4 percentage points, greater than the 1 percentage point increase reported by the United States.

Indicator 12.—Ratio of students to teaching staff: 1985, 1990, and 1994







[1]Data are from 1985, 1989, and 1994.
[2]Data are from 1985, 1990, and 1991.
NOTE: Higher education data are from 1985, 1990, and 1992.
SOURCE: Organization for Economic Co-operation and Development (OECD), Education Database, 1998.

Table 12-1.—Ratio of students (FTE) to teaching staff (FTE), all levels of education: 1985–1994

Country	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1985–94 change[1]
Australia	—	—	—	—	—	—	16.3	—	—	—	—
Austria	12.4	12.3	12.0	11.9	11.7	11.6	11.5	11.3	—	10.8	-1.6
Belgium	—	—	—	—	—	—	—	12.0	11.3	11.4	—
Canada	—	—	20.6	—	—	—	—	—	16.1	15.8	—
Czech Republic	—	—	—	—	—	—	—	13.2	—	13.7	—
Denmark	13.1	12.9	12.6	12.4	12.2	12.2	12.1	11.3	11.1	11.1	-2.0
Finland	19.0	18.9	18.5	18.1	18.0	18.0	18.0	16.2	—	13.2	-5.8
France	—	—	—	—	—	—	—	17.2	—	17.0	—
Germany[2]	—	—	—	—	—	—	—	—	15.8	15.9	—
Greece	—	—	—	—	—	—	—	—	—	14.5	—
Hungary	—	—	—	—	—	—	11.9	12.0	—	10.8	—
Iceland	—	—	—	—	—	—	—	—	—	—	—
Ireland	—	—	21.0	21.0	21.6	21.4	20.9	20.6	19.8	19.4	—
Italy	12.3	12.1	11.8	11.2	11.4	11.4	—	11.2	—	10.5	-1.8
Japan	19.1	18.9	18.6	18.4	18.1	17.6	17.3	16.8	—	17.0	-2.1
Korea	—	—	—	—	—	—	—	—	27.0	26.2	—
Luxembourg	—	—	—	—	—	—	—	—	—	—	—
Mexico	—	—	—	—	—	—	—	—	22.0	21.7	—
Netherlands	17.2	16.8	16.2	16.2	16.2	16.8	16.7	19.9	—	18.9	1.7
New Zealand	—	—	—	—	—	—	—	—	—	16.0	—
Norway	—	—	—	—	—	—	—	—	—	—	—
Poland	—	—	—	—	—	—	—	—	—	—	—
Portugal	—	—	—	—	—	—	12.8	—	9.8	12.9	—
Russia[3]	—	—	—	—	—	—	—	—	—	13.2	—
Spain	22.3	22.0	22.1	21.6	20.8	19.9	19.5	18.9	18.3	17.9	-4.4
Sweden	—	—	—	—	—	—	—	—	—	—	—
Switzerland	—	—	—	—	—	—	—	—	—	—	—
Turkey	26.5	26.7	26.7	26.9	27.0	26.6	27.0	26.3	—	25.7	-0.8
United Kingdom	—	—	—	18.0	16.1	16.7	16.7	17.4	17.1	17.8	—
United States	17.4	17.2	17.0	16.9	16.7	16.6	16.7	16.6	16.6	16.5	-0.9
Average[4]	—	—	—	—	—	—	—	—	—	—	—

— No data were reported or data were incomplete or inconsistent.

[1]Percentage points change between 1985 and 1994.

[2]Pre-1991 numbers refer to Western Germany; [Federal Republic of Germany before unification].

[3]Not an OECD member country.

[4]Not enough countries reporting data for all years to compute reliable average.

NOTE: Countries in bold are G-7 countries. "FTE" stands for "full-time equivalent." See glossary for definition.

SOURCE: Organization for Economic Co-operation and Development (OECD), Education Database, 1998.

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Table 12-2.—Ratio of students (FTE) to teaching staff (FTE) in primary education: 1985–1994

Country	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1985–94 change[1]
Australia	—	—	—	—	—	—	18.5	18.4	18.4	18.5	—
Austria	11.3	11.3	11.1	11.3	11.6	11.7	11.6	12.2	—	11.9	0.6
Belgium	—	—	—	—	—	—	9.7	13.7	13.5	13.3	—
Canada	17.9	17.6	17.7	17.2	16.6	16.7	—	—	16.5	16.5	-1.4
Czech Republic	—	—	—	—	—	—	—	—	—	19.7	—
Denmark	12.5	12.4	12.0	11.7	12.3	11.2	11.1	10.9	10.9	11.0	-1.5
Finland	18.5	18.5	18.6	18.7	18.7	18.7	18.9	19.0	—	—	—
France	—	—	—	—	—	—	22.8	20.4	—	19.6	—
Germany[2]	20.6	20.1	20.0	20.0	20.3	20.3	—	—	20.6	21.1	0.5
Greece	—	—	—	—	—	—	—	—	17.8	16.5	—
Hungary	—	—	—	—	—	—	—	—	—	10.2	—
Iceland	—	—	—	—	—	—	—	—	—	—	—
Ireland	—	—	26.3	26.4	27.2	27.0	26.4	25.6	24.9	24.3	—
Italy	13.3	12.7	12.1	11.5	11.2	11.0	11.2	10.9	—	10.2	-3.1
Japan	—	—	—	—	21.5	20.8	20.3	19.8	—	19.2	—
Korea	—	—	—	—	—	—	—	—	30.6	33.2	—
Luxembourg	—	—	—	—	—	—	—	—	—	—	—
Mexico	—	—	—	—	—	—	—	—	29.6	29.1	—
Netherlands	20.7	18.8	19.3	19.6	19.9	20.0	19.7	23.6	—	22.4	1.7
New Zealand	20.1	—	20.1	19.8	19.7	—	—	18.5	—	20.5	0.4
Norway	—	—	—	—	—	—	—	—	—	—	—
Poland	—	—	—	—	—	—	—	—	—	—	—
Portugal	—	—	—	—	—	—	13.4	—	13.2	—	—
Russia[3]	—	—	—	—	—	—	—	—	—	—	—
Spain	29.1	28.2	27.9	26.7	25.3	23.5	22.0	21.2	20.0	19.2	-9.9
Sweden	11.6	11.3	11.1	11.0	10.8	10.6	10.4	11.9	11.9	12.5	0.9
Switzerland	—	—	—	—	—	—	—	—	—	—	—
Turkey	31.1	31.2	30.9	31.1	30.6	30.5	30.4	29.3	—	27.4	-3.7
United Kingdom	18.8	18.9	21.5	21.6	21.1	21.4	21.5	20.8	20.3	20.7	1.9
United States	16.3	16.0	15.7	15.7	15.6	15.5	15.6	15.3	15.2	15.3	-1.0
Average[4]	—	—	—	—	—	—	—	—	—	—	—

— No data were reported or data were incomplete or inconsistent.

[1]Percentage points change between 1985 and 1994.

[2]Pre-1991 numbers refer to Western Germany (Federal Republic of Germany before unification).

[3]Not an OECD member country.

[4]Not enough countries reporting data for all years to compute reliable average.

NOTE: Countries in bold are G-7 countries. "FTE" stands for "full-time equivalent." See glossary for definition.

SOURCE: Organization for Economic Co-operation and Development (OECD), Education Database, 1998.

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Table 12-3.—Ratio of students (FTE) to teaching staff (FTE) in secondary education: 1985–1994

Country	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1985-94 change[1]
Australia	—	—	—	—	—	—	—	—	—	—	—
Austria	11.4	11.1	10.5	10.2	9.8	9.7	9.5	9.4	—	9.4	-2.0
Belgium	—	—	—	—	—	—	7.7	—	8.3	8.5	—
Canada	16.0	15.7	15.4	15.3	15.3	15.2	16.9	—	18.8	19.1	3.1
Czech Republic	—	—	—	—	—	—	—	13.2	—	13.1	—
Denmark	11.9	11.6	11.4	11.1	10.4	10.9	10.7	9.7	9.6	9.3	-2.6
Finland	—	—	—	—	—	—	—	—	—	—	—
France	—	—	—	—	—	—	14.0	—	—	13.7	—
Germany[2]	19.1	18.4	17.9	17.4	17.0	16.6	—	—	16.5	16.8	-2.3
Greece	—	—	—	—	—	—	—	—	—	12.1	—
Hungary	—	—	—	—	—	—	13.5	12.7	—	11.5	—
Iceland	—	—	—	—	—	—	—	—	—	—	—
Ireland	17.3	17.2	17.1	17.2	17.7	17.5	17.2	—	16.2	16.1	-1.2
Italy	10.0	9.9	9.9	9.3	9.6	9.6	9.3	8.9	—	8.5	-1.5
Japan	—	—	—	—	18.2	17.7	17.3	16.6	—	15.7	—
Korea	—	—	—	—	—	—	—	—	23.8	24.6	—
Luxembourg	—	—	—	—	—	—	—	—	—	—	—
Mexico	—	—	—	—	—	—	—	—	16.4	16.4	—
Netherlands	17.2	17.3	15.6	15.5	15.4	15.6	15.0	—	—	19.0	1.8
New Zealand	19.9	—	18.8	19.0	18.4	—	—	—	—	14.7	-5.2
Norway	—	—	—	—	—	—	—	—	—	—	—
Poland	—	—	—	—	—	—	—	—	—	—	—
Portugal	—	—	—	—	—	—	11.6	—	—	13.1	—
Russia[3]	—	—	—	—	—	—	—	—	—	—	—
Spain	17.8	17.7	18.0	18.0	17.5	16.9	17.0	16.6	16.3	16.0	-1.8
Sweden	—	—	—	—	—	—	—	—	12.3	12.4	—
Switzerland	—	—	—	—	—	—	—	—	—	—	—
Turkey	20.7	21.2	21.8	22.3	23.4	22.7	23.9	23.4	—	—	—
United Kingdom	18.4	14.6	14.7	14.8	14.3	14.8	14.7	15.2	15.3	16.1	-2.3
United States	16.4	16.1	15.9	15.6	15.2	14.9	14.7	14.9	15.7	15.6	-0.8
Average[4]	—	—	—	—	—	—	—	—	—	—	—

— No data were reported or data were incomplete or inconsistent.

[1]Percentage points change between 1985 and 1994.

[2]Pre-1991 numbers refer to Western Germany (Federal Republic of Germany before unification).

[3]Not an OECD member country.

[4]Not enough countries reporting data for all years to compute reliable average.

NOTE: Countries in bold are G-7 countries. "FTE" stands for "full-time equivalent." See glossary for definition.

SOURCE: Organization for Economic Co-operation and Development (OECD), Education Database, 1998.

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Table 12-4.—Ratio of students to teaching staff (FTE) in higher education: 1985–1992

Country	1985	1986	1987	1988	1989	1990	1991	1992	1985–92 change[1]
Australia	—	—	—	—	—	—	9.4	14.3	—
Austria	15.5	15.8	16.3	16.7	16.6	16.4	16.5	13.8	-1.7
Belgium	—	—	—	—	—	—	13.1	17.5	—
Canada	—	—	—	—	—	—	—	—	—
Czech Republic	—	—	—	—	—	—	—	9.7	—
Denmark	22.5	23.6	24.5	25.3	26.3	27.9	28.9	29.3	6.8
Finland	—	—	—	—	—	—	—	—	—
France	—	—	—	—	—	—	—	17.8	—
Germany[2]	10.7	10.9	10.9	10.8	10.8	11.0	—	—	—
Greece	—	—	—	—	—	—	—	—	—
Hungary	—	—	—	—	—	—	6.2	6.9	—
Iceland	—	—	—	—	—	—	—	—	—
Ireland	10.7	10.8	12.6	13.1	13.6	14.2	14.3	15.0	4.3
Italy	29.2	28.3	25.9	26.8	28.8	29.4	31.7	—	—
Japan	—	—	—	—	11.8	11.8	12.1	12.2	—
Korea	—	—	—	—	—	—	—	—	—
Luxembourg	—	—	—	—	—	—	—	—	—
Mexico	—	—	—	—	—	—	—	—	—
Netherlands	10.2	10.3	10.4	10.6	10.6	12.0	13.2	—	—
New Zealand	—	—	—	—	—	—	—	—	—
Norway	—	—	—	—	—	—	—	—	—
Poland	—	—	—	—	—	—	—	—	—
Portugal	—	—	—	—	—	—	11.4	—	—
Russia[3]	—	—	—	—	—	—	—	—	—
Spain	22.0	23.7	25.0	24.8	24.1	24.0	23.4	22.6	0.6
Sweden	—	—	—	—	—	—	—	—	—
Switzerland	—	—	—	—	—	—	—	—	—
Turkey	19.0	20.5	20.7	19.4	20.6	21.4	21.8	23.1	4.1
United Kingdom	—	—	—	10.8	11.4	12.2	12.8	14.0	—
United States	15.0	14.8	14.7	14.9	15.1	15.4	15.6	15.8	0.8
Average[4]	17.5	18.2	19.0	19.0	19.4	19.9	20.1	19.9	2.5

— No data were reported or data were incomplete or inconsistent.
[1]Percentage points change between 1985 and 1992.
[2]Pre-1991 numbers refer to Western Germany (Federal Republic of Germany before unification).
[3]Not an OECD member country.
[4]Average is for countries reporting data for all years included in the table.
NOTE: Countries in bold are G-7 countries. "FTE" stands for "full-time equivalent." See glossary for definition.
SOURCE: Organization for Economic Co-operation and Development (OECD), Education Database, 1998.

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PART IV: SYSTEM OUTCOMES

Indicator 13: High school graduation ratios

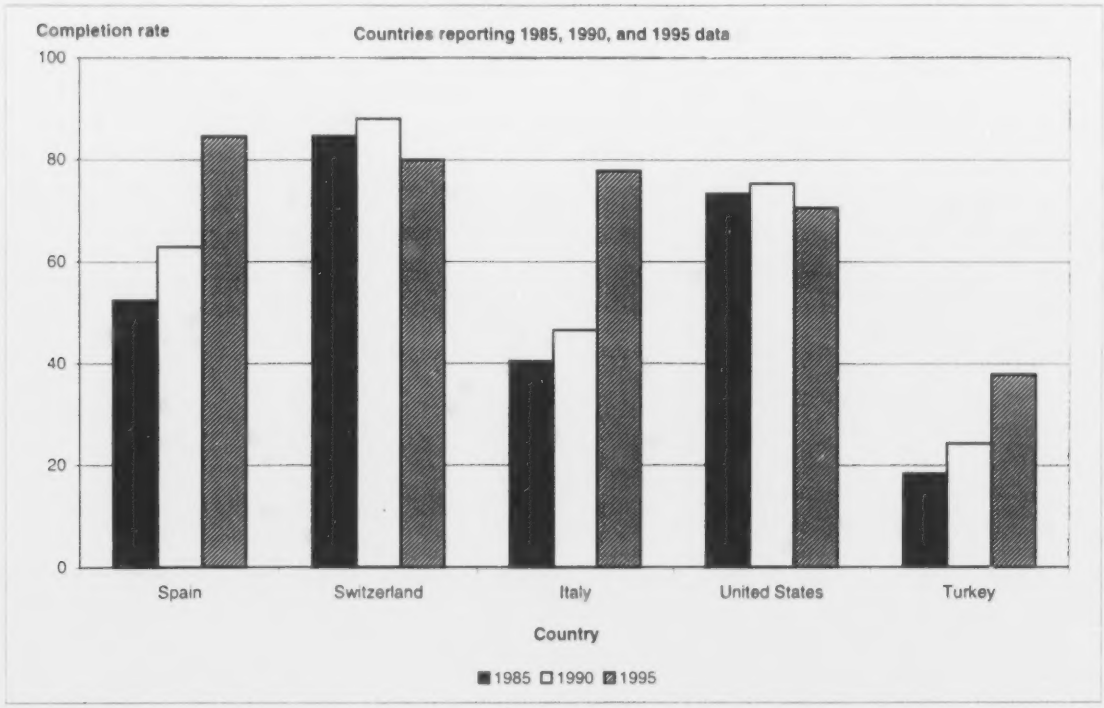
Completion of at least an upper secondary level of education among many countries is roughly equivalent to completing high school in the United States. This indicator on completion ratios provides an indirect measure of a nation's supply of citizens with specific educational knowledge and skills and hence, some indication of the country's capacity for sustained economic growth and competitiveness. Education at this level also serves as the foundation for postsecondary learning and training opportunities. Upper secondary graduation ratios are estimated as the number of upper secondary graduates per 100 persons at the age at which students typically complete upper secondary education.* Trends in upper secondary attainment over time provide some indication of how a country's educational capital has expanded over time.

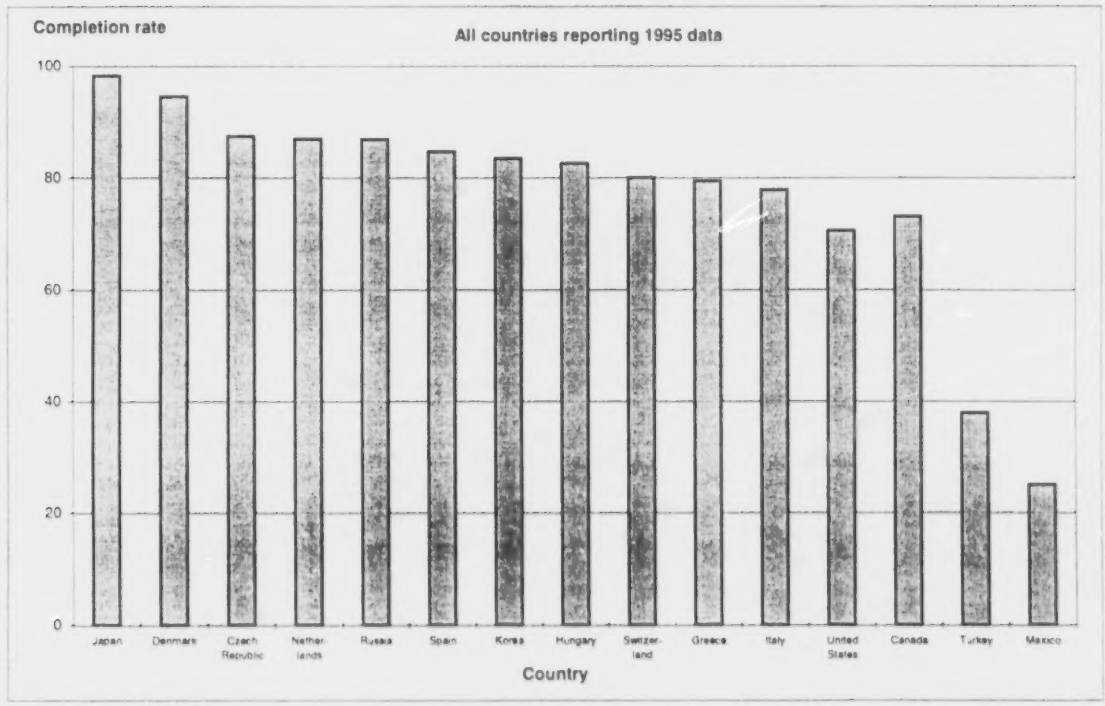
- Only 5 countries reported upper secondary graduation ratios for the beginning and the end of the 1985–1995 period. Turkey saw its ratio of students graduating from upper secondary more than double. Italy also nearly doubled its upper secondary completion ratio, and Spain's rose by 33 percentage points. In contrast, the United States and Switzerland each reported relatively small decreases in their completion ratios between 1985 and 1995.

- Of the 15 countries reporting data in 1995, only Turkey and Mexico had upper secondary graduation ratios under 70 percent. Denmark consistently had the highest upper secondary completion ratio for all years in which it reported data, with the exception of Japan in 1995. The United States had the third-lowest upper secondary graduation ratio (at 71) among OECD countries reporting data in 1995.

*See supplementary table S-3 for the typical age of upper-secondary graduation in OECD countries.

Indicator 13.—High school graduation ratios





SOURCE: Organization for Economic Co-operation and Development (OECD), Education Database, 1998; U.S Department of Commerce, Bureau of the Census, International Database, 1998.

Table 13.—High school graduation ratios: 1985–1995

Country	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1985-95 change[1]
Australia	—	—	—	—	—	—	—	88.5	—	—	—	—
Austria	—	—	—	78.3	86.5	85.8	87.5	—	—	87.0	—	—
Belgium	—	—	—	—	—	—	—	79.1	—	—	—	—
Canada	—	—	—	—	—	—	69.5	66.8	69.8	72.2	73.1	—
Czech Republic	—	—	—	—	—	—	—	90.5	87.9	79.9	87.5	—
Denmark	—	—	97.0	100.8	102.1	99.6	100.1	98.2	—	—	94.6	—
Finland	—	—	—	—	—	—	—	—	—	—	—	—
France	64.1	67.1	66.9	69.1	70.0	71.6	75.8	80.9	83.8	86.9	—	—
Germany[2]	—	—	—	—	—	—	—	—	84.1	90.6	—	—
Greece	—	—	—	—	—	—	—	78.3	74.8	80.3	79.5	—
Hungary	—	—	—	—	—	—	86.4	81.9	78.7	—	82.6	—
Iceland	—	—	—	—	—	—	—	—	—	—	—	—
Ireland	—	—	—	—	—	—	—	98.4	92.5	95.4	—	—
Italy	40.3	41.4	42.4	44.4	48.4	46.5	51.5	59.3	—	74.1	77.9	37.6
Japan	—	—	—	—	—	91.6	91.6	92.7	94.0	93.4	98.3	—
Korea	—	—	—	—	—	—	—	—	87.0	86.0	83.5	—
Luxembourg	—	45.8	50.8	51.6	55.0	—	—	—	—	—	—	—
Mexico	—	—	—	—	—	—	—	—	24.7	24.2	25.0	—
Netherlands	—	69.2	61.8	65.9	71.9	76.6	82.2	—	69.7	80.0	87.0	—
New Zealand	—	—	—	—	—	—	—	—	—	—	—	—
Norway	72.3	75.2	75.3	75.4	79.5	80.4	—	—	—	—	—	—
Poland	—	—	—	—	—	—	—	—	—	—	—	—
Portugal	23.1	19.9	23.5	—	—	40.3	49.3	—	—	—	—	—
Russia[3]	—	—	—	—	—	—	—	—	—	89.5	86.9	—
Spain	52.4	51.6	51.4	56.4	56.4	62.9	62.8	73.2	66.2	81.0	84.7	32.3
Sweden	79.4	78.9	78.8	85.3	84.2	78.8	80.4	83.8	80.5	77.4	—	—
Switzerland	84.8	85.7	86.7	87.2	88.2	88.1	87.7	81.0	79.9	80.9	80.0	-4.8
Turkey	18.3	20.0	20.5	22.0	22.4	24.3	28.7	30.3	—	39.6	37.9	19.6
United Kingdom	—	—	—	—	—	—	—	78.2	—	—	—	—
United States	73.3	70.8	70.4	70.8	75.3	75.4	74.5	72.5	72.6	69.3	70.6	-2.7
Average[4]	—	—	—	—	—	—	—	—	—	—	—	—

— No data were reported or data were incomplete or inconsistent.

[1]Percentage points change between 1985 and 1995.

[2]Pre-1991 numbers refer to Western Germany (Federal Republic of Germany before unification).

[3]Not an OECD member country.

[4]Not enough countries reporting data for all years to compute reliable average.

NOTE: Countries in bold are G-7 countries. The graduation ratio relates the number of people graduating with upper-secondary degrees to the number of people in the population at typical age of graduation. See supplemental notes and tables for an explanation of why rates in some countries exceed 100.

SOURCE: Organization for Economic Co-operation and Development (OECD), Education Database, 1998; U.S. Department of Commerce, Bureau of the Census, International Database, 1998.

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Indicator 14: First university degree graduation ratios

The first university degree graduation ratio is the ratio of the number of students who receive a first university degree to the total population at the typical age of graduation, expressed as a percentage.* This ratio provides a broad indication of the proportion of the population of graduating age that receives an advanced education, and indirectly measures the skills available to national economies. A comparison of this ratio over time indicates changes in a country's pool of skilled workers. Furthermore, differences in first university degree graduation ratios between men and women may reflect differing access to higher education by sex or differences in the choices men and women make. Changing trends in graduation ratios between men and women are suggestive of societal changes that occur both in terms of access to higher education and in terms of opportunities within the workplace. First university degrees generally correspond to the bachelor's degree in the United States although in some countries a first degree may be more similar to a U.S. master's degree.

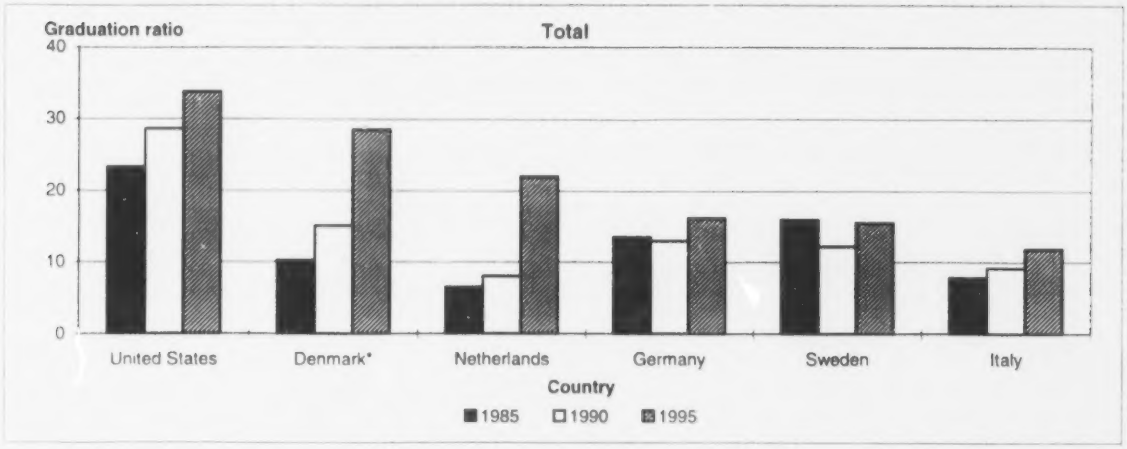
- With the exception of Sweden, every OECD country reporting data showed an increase in their first university degree graduation ratios. Among OECD countries reporting data, Denmark, the Netherlands, the United States, and Spain had large increases of 10 percentage points or more in first university degree graduation ratios between 1985 and 1995. Between 1985 and 1995, the United States and Canada consistently had the highest first university degree graduation ratios.

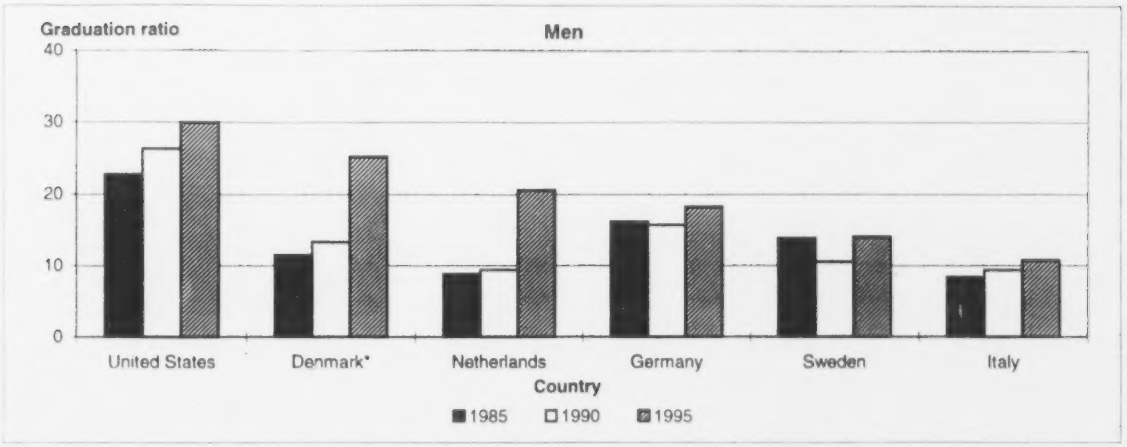
- First university degree graduation ratios for men have been increasing at a slower rate than those for women in most reporting OECD countries between 1985 and 1995. Among countries reporting data, the largest increases occurred in Denmark and the Netherlands for both men and women, with both countries more than doubling their graduation ratios. The United States, Finland, and Spain also increased their graduation ratios for men by 6 percentage points or more. Sweden, on the other hand, showed relatively little change in male graduation ratios between 1985 and 1995. Among countries reporting data in 1995, the United States had the third highest ratio of men earning their first university degree at 30 percent, slightly behind Japan and the United Kingdom.

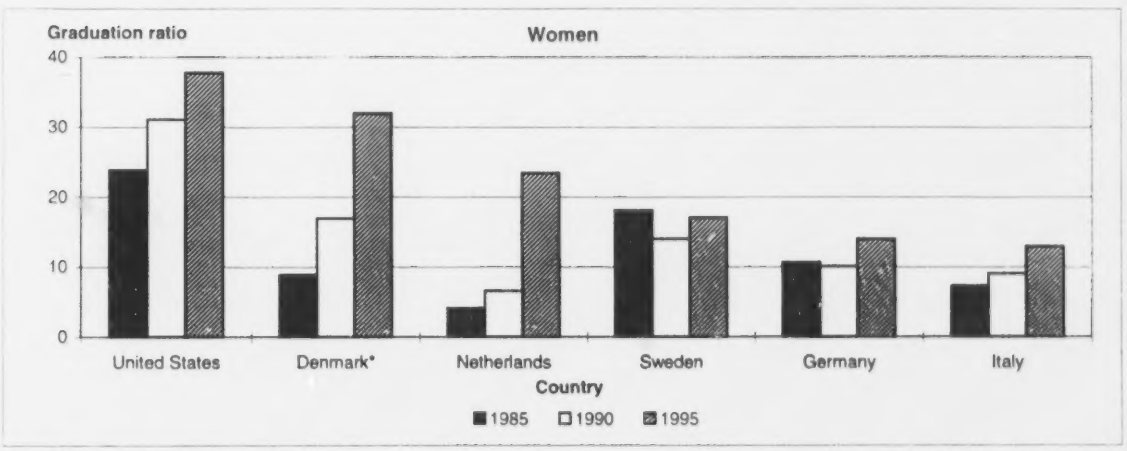
- First university degree graduation ratios for women met or exceeded those for men in most OECD countries between 1985 and 1995. Only in Japan, Korea, Germany, Switzerland, and Turkey were graduation ratios among women substantially lower than those among men. In contrast, graduation ratios for men were substantially lower than for women in Australia, Canada, and Norway. Denmark experienced the greatest change with a 23 points increase in the graduation ratios among women between 1985 and 1995. Among OECD countries reporting data, the Netherlands, Spain, and Portugal also had increases in first university degree graduation ratios for women of more than 10 percentage points. Sweden was the only country to report a decline in first university degree graduation ratios among women. Among countries reporting data in 1995, the United States had the second highest ratio of women earning their first university degree at 38 percent, below Australia.

*See supplemental table S-3 for the typical age of first university degree graduation in OECD countries.

Indicator 14.—First university degree graduation ratios: 1985, 1990, and 1995







*Post-1991 numbers reflect yearly changes in definition of first university degrees.
NOTE: In the United States first university degrees are equivalent to a bachelor's degree.
SOURCE: Organization for Economic Co-operation and Development (OECD), Education Database, 1998; U.S. Department of Commerce, Bureau of the Census, International Database, 1998.

Table 14-1.—First university degree graduation ratios, total: 1985–1995

Country	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1985-95 change[1]
Australia	—	—	17.9	18.7	19.6	—	24.1	28.5	28.5	32.2	34.9	—
Austria	6.6	6.4	6.8	7.2	6.6	7.7	7.7	—	—	9.2	9.8	3.2
Belgium	12.7	10.9	10.0	11.6	16.5	17.1	13.2	—	14.2	—	—	—
Canada	—	—	—	—	—	—	31.1	32.2	28.5	30.3	31.8	—
Czech Republic	—	—	—	—	—	—	—	—	12.3	12.6	11.5	—
Denmark[2]	10.2	10.1	10.2	10.1	12.9	15.0	16.6	22.3	30.6	30.5	28.5	18.3
Finland	14.6	15.1	14.9	18.1	16.9	17.1	17.1	—	19.9	22.2	22.2	7.6
France	11.5	11.4	12.1	12.6	13.8	14.9	16.3	—	13.5	—	—	—
Germany[3]	13.5	13.3	13.3	13.5	13.2	12.9	12.4	—	13.1	14.6	16.2	2.7
Greece	—	—	—	—	—	—	—	11.6	11.7	—	—	—
Hungary	—	—	—	—	—	—	—	—	16.3	—	18.0	—
Iceland	—	—	—	—	—	—	—	—	—	28.7	—	—
Ireland	—	15.9	15.9	17.1	16.4	17.4	16.8	17.8	21.4	—	21.2	—
Italy	7.8	8.0	7.7	8.2	8.9	9.2	9.5	—	—	11.3	11.8	4.0
Japan	—	—	—	—	—	22.1	23.2	23.2	23.0	23.2	22.8	—
Korea	—	—	—	—	—	—	—	—	24.0	23.2	23.6	—
Luxembourg	—	—	—	—	—	—	—	—	—	—	—	—
Mexico	—	—	—	—	—	—	—	—	6.8	7.1	9.4	—
Netherlands[2]	6.5	6.9	8.0	11.0	10.2	8.0	8.3	17.6	27.0	—	22.0	15.5
New Zealand	—	16.1	17.4	16.3	36.1	15.3	15.2	17.2	20.6	—	24.7	—
Norway	18.8	17.1	22.3	23.3	24.6	27.5	30.7	19.0	21.5	23.0	23.0	4.2
Poland	—	—	—	—	—	—	—	—	11.4	—	—	—
Portugal	6.5	5.6	6.9	—	—	7.6	—	—	9.6	13.8	14.6	8.1
Russia[4]	—	—	—	—	—	—	—	—	—	21.8	19.6	—
Spain	14.4	15.0	16.1	16.9	17.7	18.6	19.9	—	21.1	—	24.0	9.6
Sweden	15.9	14.2	14.3	13.3	13.0	12.2	12.5	14.1	13.1	13.7	15.5	-0.4
Switzerland	7.2	7.3	7.6	7.7	7.7	7.7	7.6	—	8.4	8.5	9.1	1.9
Turkey	3.5	4.5	5.3	5.5	6.0	6.1	6.1	6.1	6.4	—	7.0	3.5
United Kingdom	—	—	—	—	—	—	—	20.4	22.0	25.9	31.6	—
United States	23.3	23.7	24.7	26.1	27.3	28.6	29.3	27.4	30.0	32.2	33.8	10.5
Average[5]	—	—	—	—	—	—	—	—	—	—	—	—

— No data were reported or data were incomplete or inconsistent.

[1]Percentage points change between 1985 and 1995.

[2]Post-1991 numbers reflect yearly changes in definition of first university degrees.

[3]Pre-1991 numbers refer to Western Germany (Federal Republic of Germany before unification).

[4]Not an OECD member country.

[5]Not enough countries reporting data for all years to compute reliable average.

NOTE: Countries in bold are G-7 countries. The graduation ratio relates the number of people with first-degrees to the number of people in the population at typical age of graduation. In the United States, first university degrees are equivalent to a bachelor's degree.

SOURCE: Organization for Economic Co-operation and Development (OECD). Education Database, 1998; U.S. Department of Commerce, Bureau of the Census, International Database, 1998.

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Table 14-2.—First university degree graduation ratios for men: 1985–1995

Country	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1985–95 change[1]
Australia	—	—	17.5	17.8	18.9	—	21.0	23.7	23.7	25.9	27.6	—
Austria	8.0	7.6	8.0	8.1	7.6	8.5	8.5	—	—	10.1	10.6	2.6
Belgium	16.4	13.7	12.0	8.8	18.9	19.5	15.0	—	15.2	—	—	—
Canada	—	—	—	—	—	—	26.6	27.6	24.2	25.5	26.4	—
Czech Republic	—	—	—	—	—	—	—	—	12.7	12.7	10.9	—
Denmark[2]	11.5	11.9	12.6	12.6	11.5	13.3	14.4	17.7	27.0	26.4	25.1	13.6
Finland	15.5	15.6	15.0	20.0	17.1	17.0	16.9	—	19.6	22.2	22.0	6.5
France	12.4	11.9	12.4	12.9	13.7	14.7	14.9	—	12.7	—	—	—
Germany[3]	16.1	15.8	16.0	16.4	16.1	15.7	14.3	—	15.2	16.4	18.2	2.1
Greece	—	—	—	—	—	—	—	9.8	9.5	—	—	—
Hungary	—	—	—	—	—	—	12.2	—	14.3	—	15.5	—
Iceland	—	—	—	—	—	—	—	—	—	21.0	—	—
Ireland	—	31.2	31.3	33.4	31.9	17.5	17.0	17.9	20.9	—	19.9	—
Italy	8.4	8.6	7.9	8.5	9.1	9.3	9.5	—	—	10.3	10.8	2.4
Japan	—	—	—	—	—	31.5	32.7	31.9	31.1	31.0	30.4	—
Korea	—	—	—	—	—	—	—	—	28.5	26.6	26.6	—
Luxembourg	—	—	—	—	—	—	—	—	—	—	—	—
Mexico	—	—	—	—	—	—	—	—	—	—	9.8	—
Netherlands[2]	8.8	9.2	10.3	13.2	12.3	9.4	9.6	17.3	27.6	—	20.6	11.8
New Zealand	—	18.1	18.7	17.6	16.6	15.4	15.4	16.9	18.7	—	20.9	—
Norway	14.6	13.3	15.2	16.1	18.1	19.1	22.3	14.5	16.4	17.4	17.2	2.6
Poland	—	—	—	—	—	—	—	—	10.8	—	—	—
Portugal	6.4	5.0	6.4	—	—	5.9	—	—	—	10.4	10.8	4.4
Russia[4]	—	—	—	—	—	—	—	—	—	—	—	—
Spain	13.3	13.3	13.6	14.0	14.6	15.3	16.3	—	18.1	—	19.6	6.3
Sweden	13.8	12.1	12.6	11.4	11.1	10.5	10.9	11.8	11.9	12.0	14.0	0.2
Switzerland	9.9	10.0	10.2	10.4	10.1	10.3	9.8	—	10.7	10.7	11.4	1.5
Turkey	4.6	5.6	6.7	6.9	7.3	7.5	7.5	7.5	7.8	—	8.6	4.0
United Kingdom	—	—	—	—	—	—	—	21.0	21.9	25.5	30.3	—
United States	22.7	23.0	23.6	24.6	25.5	26.2	26.5	24.6	26.8	28.7	29.9	7.2
Average[5]	—	—	—	—	—	—	—	—	—	—	—	—

— No data were reported or data were incomplete or inconsistent.
[1]Percentage points change between 1985 and 1995.
[2]Post-1991 numbers reflect yearly changes in definition of first university degrees.
[3]Pre-1991 numbers refer to Western Germany (Federal Republic of Germany before unification).
[4]Not an OECD member country.
[5]Not enough countries reporting data for all years to compute reliable average.
NOTE: Countries in bold are G-7 countries. The graduation ratio relates the number of people with first degrees to the number of people in the population at typical age of graduation. In the United States, first university degrees are equivalent to a bachelor's degree.
SOURCE: Organization for Economic Co-operation and Development (OECD), Education Database, 1998; U.S. Department of Commerce, Bureau of the Census, International Database, 1998.

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Table 14-3.—First university degree graduation ratios for women: 1985–1995

Country	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1985–95 change[1]
Australia	—	—	18.4	19.6	21.1	—	27.3	33.6	33.6	38.7	42.7	—
Austria	5.2	5.2	5.5	6.3	5.5	6.8	6.9	—	—	8.4	8.9	3.7
Belgium	8.9	7.9	7.8	14.5	14.1	14.7	11.4	—	13.2	—	—	—
Canada	—	—	—	—	—	—	35.8	37.6	32.8	35.3	37.4	—
Czech Republic	—	—	—	—	—	—	—	—	11.9	12.5	12.1	—
Denmark[2]	8.8	8.1	7.7	7.4	14.4	16.9	18.9	27.2	34.3	34.9	31.9	23.1
Finland	13.7	14.5	14.8	16.2	16.6	17.1	17.3	17.9	20.2	22.1	22.3	8.6
France	10.5	10.8	11.7	12.3	13.9	15.1	17.7	—	14.4	—	—	—
Germany[3]	10.6	10.6	10.4	10.5	10.1	10.0	10.4	—	10.8	12.6	14.0	3.4
Greece	—	—	—	—	—	—	—	13.4	14.1	—	—	—
Hungary	—	—	—	—	—	—	—	—	18.4	—	20.7	—
Iceland	—	—	—	—	—	—	—	—	—	36.8	—	—
Ireland	—	—	—	—	—	17.3	16.6	17.7	21.8	—	22.7	—
Italy	7.2	7.4	7.4	7.8	8.7	9.0	9.5	—	—	12.4	12.9	5.7
Japan	—	—	—	—	—	12.4	13.4	14.0	14.5	15.2	14.9	—
Korea	—	—	—	—	—	—	—	—	19.3	19.5	20.3	—
Luxembourg	—	—	—	—	—	—	—	—	—	—	—	—
Mexico	—	—	—	—	—	—	—	—	13.4	14.2	—	—
Netherlands[2]	4.1	4.6	5.6	8.7	7.9	6.5	6.9	17.8	26.5	—	23.4	19.3
New Zealand	—	14.1	16.1	15.0	15.5	15.1	15.0	17.4	22.5	—	28.6	—
Norway	23.2	21.1	29.8	31.0	31.7	36.3	39.4	23.7	26.8	28.8	28.9	5.7
Poland	—	—	—	—	—	—	—	—	12.1	—	—	—
Portugal	6.6	6.1	7.3	—	—	9.3	—	—	19.6	17.2	18.3	11.7
Russia[4]	—	—	—	—	—	—	—	—	—	—	—	—
Spain	15.6	16.7	18.7	20.0	21.0	22.0	23.6	—	24.2	—	28.6	13.0
Sweden	18.1	16.4	16.0	15.2	15.1	14.0	14.3	16.4	14.4	15.4	17.0	-1.1
Switzerland	4.6	4.6	4.9	5.0	5.3	5.1	5.4	—	6.1	6.3	6.8	2.2
Turkey	2.4	3.2	3.8	4.0	4.6	4.5	4.5	4.6	4.9	—	5.2	2.8
United Kingdom	—	—	—	—	—	—	—	19.8	22.2	26.3	32.9	—
United States	23.8	24.4	25.8	27.6	29.2	31.1	32.3	30.3	33.2	35.9	37.8	14.0
Average[5]	—	—	—	—	—	—	—	—	—	—	—	—

— No data were reported or data were incomplete or inconsistent.

[1]Percentage points change between 1985 and 1995.

[2]Post-1991 numbers reflect yearly changes in definition of first university degrees.

[3]Pre-1991 numbers refer to Western Germany (Federal Republic of Germany before unification).

[4]Not an OECD member country.

[5]Not enough countries reporting data for all years to compute reliable average.

NOTE: Countries in bold are G-7 countries. The graduation ratio relates the number of people with first-degrees to the number of people in the population at typical age of graduation. In the United States, first university degrees are equivalent to a bachelor's degree.

SOURCE: Organization for Economic Co-operation and Development (OECD), Education Database, 1998; U.S. Department of Commerce, Bureau of the Census, International Database, 1998.

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Indicator 15: Percentage of first university degrees awarded in science*

The percentage of first university degrees that are awarded in science gives an indication of the supply of highly qualified labor in that field, and provides a measure of the relative size of the scientific workforce in a particular country. Both the overall and relative numbers of college graduates in science and engineering can indicate a country's ability to compete globally in the fields of science and engineering. Differences among countries and changes over time can provide an indicator of differences in the demand for scientific talent or economic focus. First university degrees normally correspond to the bachelor's degree in the United States.

- In the majority of OECD countries for which data are available, the percentage of first university degrees awarded in science remained stable or increased between 1985 and 1995. The largest increase took place in Sweden, a country that in 1995 awarded about one fourth of its first university degrees in science, placing it fourth after Finland, Ireland, and Germany. In the United States, the percentage of science degrees awarded dropped by 5 percentage points between 1985 and 1995. This decline placed the United States next to last among the 16 reporting OECD countries in the percentage of first university degrees awarded in science.

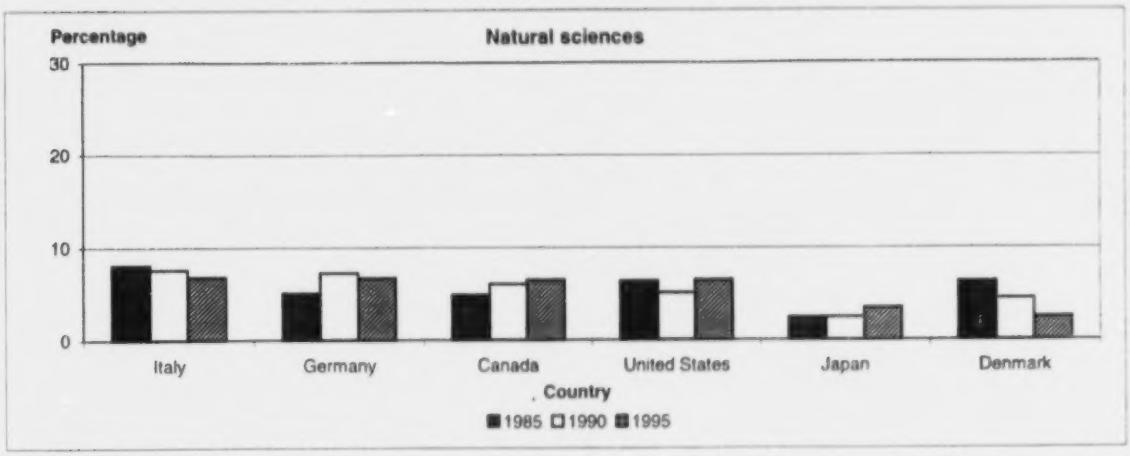
- The percentage of first university degrees awarded in the natural sciences increased in the majority of OECD reporting data between 1985 and 1995. Ireland, Germany, and Canada showed the largest increases, while Portugal, Denmark, and Finland posted the largest drops. The proportion of natural science degrees remained stable in the United States between 1985 and 1995.

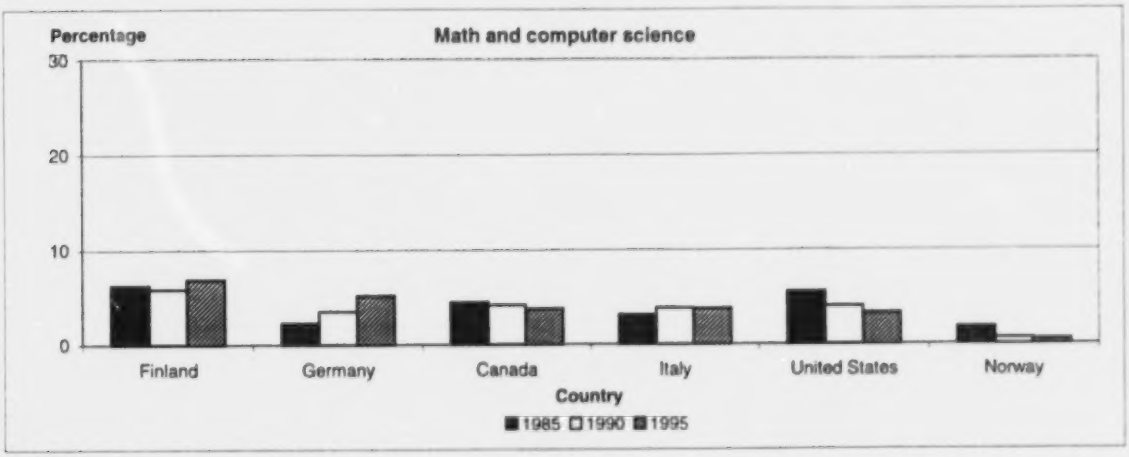
- The percentage of first university degrees awarded in math and computer science increased between 1985 and 1995 in the majority of reporting OECD countries, with the exception of Norway, the United States, and Canada. Finland and Canada awarded the largest percentage of first degrees in math and computer science for most years between 1985 and 1995.

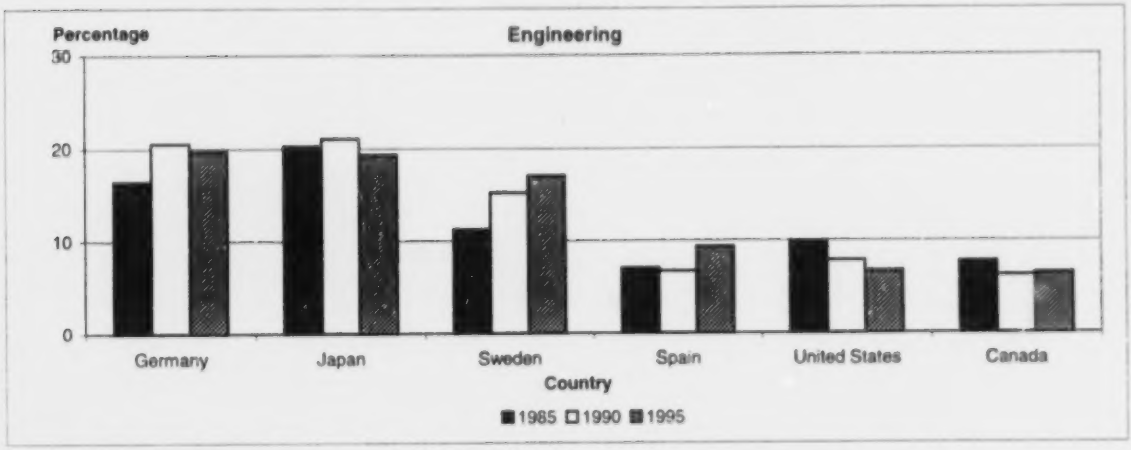
- In the majority of OECD countries, the percentage of first degrees awarded in engineering increased between 1985 and 1995. The largest increases occurred in Sweden, Germany, and Spain. In 1995, Germany and Japan awarded about 3 times as many engineering degrees as a percentage of all first university degrees as the United States or Canada.

*The list of science degree fields in this indicator is not included because different countries include different degree fields, the list is extensive, and data are available for U.S. degrees only. However, science degrees only include degrees in the broad fields of natural sciences, math and computer science, and engineering, and do not include social science fields.

Indicator 15.—Percentage of first university degrees awarded in science: 1985, 1990, and 1995







NOTE: In the United States, first university degrees are equivalent to a bachelor's degree.
SOURCE: Organization for Economic Co-operation and Development (OECD), Education Database, 1998.

Table 15-1.—Percentage of first university degrees awarded in science: 1985–1995

Country	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1985–95 change[1]
Australia	—	—	—	—	—	—	—	—	21.7	19.2	19.3	—
Austria	16.8	15.9	16.3	18.2	20.9	19.6	20.1	—	—	20.7	21.1	4.3
Belgium	—	26.3	29.7	—	—	—	32.2	—	27.3	—	—	—
Canada	17.1	17.9	17.9	18.0	17.2	16.4	15.5	—	16.2	16.3	16.7	-0.4
Czech Republic	—	—	—	—	—	—	—	—	30.6	33.0	—	—
Denmark	—	—	—	—	—	—	—	—	—	—	—	—
Finland	39.3	38.3	34.7	31.5	29.3	33.5	34.5	—	35.1	37.0	37.2	-2.1
France	—	—	—	—	—	—	—	—	—	—	—	—
Germany[2]	23.8	25.2	26.9	29.2	30.3	31.3	32.1	—	33.4	31.7	31.6	7.8
Greece	—	—	—	—	—	—	—	—	20.7	—	—	—
Hungary	—	—	—	—	—	—	—	—	—	—	22.5	—
Iceland	—	—	—	—	—	—	—	—	—	15.7	—	—
Ireland	28.8	26.7	27.9	27.9	32.0	34.1	28.5	—	29.2	—	32.3	3.5
Italy	19.5	19.0	18.9	19.3	19.7	19.7	19.8	—	—	19.1	19.5	—
Japan	22.7	23.1	23.5	23.6	23.8	23.5	23.5	—	22.8	22.8	22.8	0.1
Korea	—	—	—	—	—	—	—	—	—	—	—	—
Luxembourg	—	—	—	—	—	—	—	—	—	—	—	—
Mexico	—	—	—	—	—	—	—	—	—	—	—	—
Netherlands	21.8	21.1	22.7	26.4	20.5	21.1	21.4	—	—	—	—	—
New Zealand	20.5	—	—	21.7	23.0	19.5	16.3	—	15.4	—	—	—
Norway	—	—	12.7	11.5	15.0	12.9	12.3	—	19.1	18.6	16.8	—
Poland	—	—	—	—	—	—	—	—	21.9	—	—	—
Portugal	—	20.8	20.2	—	—	—	—	—	14.1	15.9	15.0	—
Russia[3]	—	—	—	—	—	—	—	—	—	40.6	—	—
Spain	13.9	14.0	14.1	14.0	14.0	15.0	15.4	—	16.8	—	18.2	4.3
Sweden	15.4	18.7	21.6	21.6	22.6	24.0	24.3	—	26.0	25.0	26.4	11.0
Switzerland	20.2	20.9	22.1	22.8	22.8	23.0	22.7	—	22.0	22.1	22.3	2.1
Turkey	23.0	20.4	21.7	22.7	21.2	20.6	21.3	—	21.8	—	20.9	-2.1
United Kingdom	—	—	—	—	—	—	—	—	29.4	24.0	—	—
United States	21.7	21.7	20.9	19.5	18.1	16.9	15.9	—	15.6	15.9	16.5	-5.2
Average[4]	22.9	23.7	23.9	23.7	23.4	24.1	24.1	—	24.4	24.4	24.8	1.9

— No data were reported or data were incomplete or inconsistent.

[1]Percentage points change between 1985 and 1995.

[2]Pre-1991 numbers refer to Western Germany (Federal Republic of Germany before unification).

[3]Not an OECD member country.

[4]Average is for countries reporting data for all years included in the table, except 1992.

NOTE: Countries in bold are G-7 countries. In the United States, first university degrees are equivalent to a bachelor's degree.

SOURCE: Organization for Economic Co-operation and Development (OECD), Education Database, 1998.

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Table 15-2.—Percentage of first university degrees awarded in the natural sciences: 1985–1995

Country	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1985–95 change[1]
Australia	—	—	16.0	16.3	16.1	—	15.9	—	11.5	10.2	9.9	—
Austria	5.0	4.5	4.7	4.5	6.0	5.3	5.9	—	—	5.5	6.0	1.0
Belgium	4.6	5.5	5.8	—	—	—	4.3	—	3.7	—	—	—
Canada	4.9	5.2	5.6	5.8	6.1	6.0	5.7	—	6.1	6.2	6.5	1.6
Czech Republic	—	—	—	—	—	—	—	—	2.6	2.1	—	—
Denmark	6.3	6.3	6.0	6.1	5.3	4.4	6.1	—	4.2	4.2	2.5	-3.8
Finland	7.7	8.5	5.6	5.7	4.4	4.1	4.2	—	4.0	4.4	4.0	-3.7
France	—	—	—	—	—	—	—	—	—	—	—	—
Germany[2]	5.0	5.1	5.5	6.2	6.7	7.2	6.9	—	7.2	6.9	6.7	1.7
Greece	—	—	—	—	—	—	—	—	7.3	—	—	—
Hungary	—	—	—	—	—	—	—	—	2.2	—	2.0	—
Iceland	—	—	—	—	—	—	—	—	—	7.6	—	—
Ireland	12.8	11.4	13.2	13.4	13.6	14.1	12.4	—	11.6	—	16.9	4.1
Italy	8.1	7.7	7.7	7.5	7.6	7.6	7.5	—	—	7.0	6.8	-1.3
Japan	2.4	2.5	2.5	2.6	2.6	2.4	2.4	—	3.3	3.4	3.4	1.0
Korea	—	—	—	—	—	—	—	—	13.9	9.8	10.1	—
Luxembourg	—	—	—	—	—	—	—	—	—	—	—	—
Mexico	—	—	—	—	—	—	—	—	—	—	—	—
Netherlands	8.5	7.9	7.6	8.8	7.1	7.1	6.5	—	—	—	—	—
New Zealand	11.7	—	—	10.5	11.6	8.2	7.1	—	6.9	—	—	—
Norway	2.5	2.6	2.4	1.7	1.8	2.1	1.8	—	4.4	4.1	3.1	0.6
Poland	—	—	—	—	—	—	—	—	3.3	—	—	—
Portugal	6.5	6.4	2.9	—	—	6.7	—	—	2.7	2.6	2.2	-4.3
Russia[3]	—	—	—	—	—	—	—	—	—	5.2	—	—
Spain	5.5	5.7	5.8	5.4	5.5	5.7	5.3	—	5.1	—	4.3	-1.2
Sweden	2.6	3.1	3.5	3.4	3.5	4.1	4.2	—	3.1	3.9	3.9	1.3
Switzerland	10.3	9.5	10.9	10.6	11.0	11.2	11.0	—	10.2	10.4	10.4	0.1
Turkey	3.6	3.0	3.2	4.8	4.7	4.6	4.9	—	5.1	—	5.1	1.5
United Kingdom	—	—	—	—	—	—	—	—	10.1	5.2	—	—
United States	6.3	6.1	5.9	5.5	5.2	5.1	5.1	—	5.5	6.0	6.5	0.2
Average[4]	5.3	5.4	5.3	5.3	5.2	5.2	5.3	—	5.3	5.5	5.2	-0.1

— No data were reported or data were incomplete or inconsistent.
[1]Percentage points change between 1985 and 1995.
[2]Pre-1991 numbers refer to Western Germany (Federal Republic of Germany before unification).
[3]Not an OECD member country.
[4]Average is for countries reporting data for all years included in the table, except 1992.
NOTE: Countries in bold are G-7 countries. In the United States, first university degrees are equivalent to a bachelor's degree.
SOURCE: Organization for Economic Co-operation and Development (OECD), Education Database, 1998.

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Table 15-3.—Percentage of first university degrees awarded in math and computer science: 1985–1995

Country	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1985–95 change[1]
Australia	—	—	—	—	—	—	—	3.6	4.1	3.6	3.8	—
Austria	4.1	4.0	4.0	5.5	5.9	5.2	4.8	—	—	5.4	5.3	1.2
Belgium	1.7	2.1	1.8	—	—	—	1.7	—	1.6	—	—	—
Canada	4.5	5.1	5.2	4.9	4.6	4.2	3.7	3.6	3.7	3.8	3.8	-0.7
Czech Republic	—	—	—	—	—	—	1.1	—	1.0	2.5	—	—
Denmark	—	—	—	—	—	—	—	—	—	—	—	—
Finland	6.3	6.1	5.1	5.4	4.0	5.9	6.6	—	6.9	7.4	6.9	0.6
France	—	—	—	—	—	—	—	—	—	—	—	—
Germany[2]	2.3	2.6	2.7	2.9	3.3	3.5	3.9	—	4.7	5.2	5.2	2.9
Greece	—	—	—	—	—	—	—	5.9	3.8	—	—	—
Hungary	—	—	—	—	—	—	—	—	—	—	2.6	—
Iceland	—	—	—	—	—	—	—	—	—	2.8	—	—
Ireland	4.0	2.7	3.1	2.6	4.7	6.3	4.4	5.0	5.8	—	4.7	0.7
Italy	3.1	3.2	3.5	3.9	3.9	3.9	3.8	—	—	3.4	3.8	0.7
Japan[3]	—	—	—	—	—	—	—	—	—	—	—	—
Korea	—	—	—	—	—	—	—	—	—	—	—	—
Luxembourg	—	—	—	—	—	—	—	—	—	—	—	—
Mexico	—	—	—	—	—	—	—	—	—	—	—	—
Netherlands	1.2	1.3	1.4	1.5	1.6	1.6	1.6	2.8	1.9	—	1.6	0.4
New Zealand	5.5	—	—	5.6	6.7	5.5	4.0	3.4	4.5	—	—	—
Norway	1.8	2.2	1.6	1.3	0.8	0.6	0.6	—	0.5	0.4	0.5	-1.3
Poland	—	—	—	—	—	—	—	—	2.5	—	—	—
Portugal	—	1.9	2.2	—	—	—	—	—	1.3	2.4	2.8	—
Russia[4]	—	—	—	—	—	—	—	—	—	15.1	—	—
Spain	1.3	1.5	1.6	2.0	2.0	2.6	2.9	—	3.8	—	4.5	3.2
Sweden	1.6	2.4	3.5	4.2	4.6	4.7	4.9	5.2	5.6	5.3	5.5	3.9
Switzerland	2.1	3.0	3.2	3.3	3.8	3.7	3.8	—	3.0	3.3	3.7	1.6
Turkey	1.6	1.6	1.9	2.6	2.3	2.1	2.3	1.6	2.8	—	2.7	1.1
United Kingdom	—	—	—	—	—	—	—	6.6	5.8	6.0	—	—
United States	5.5	5.9	5.7	5.1	4.5	4.0	3.6	3.7	3.3	3.3	3.3	-2.2
Average[5]	—	—	—	—	—	—	—	—	—	—	—	—

— No data were reported or data were incomplete or inconsistent.

[1]Percentage points change between 1985 and 1995.

[2]Pre-1991 numbers refer to Western Germany (Federal Republic of Germany before unification).

[3]The percentage of first degrees that are in mathematics and computer science is included in the percent for first degrees in engineering.

[4]Not an OECD member country.

[5]Not enough countries reporting data for all years to compute reliable average.

NOTE: Countries in bold are G-7 countries. In the United States, first university degrees are equivalent to a bachelor's degree.

SOURCE: Organization for Economic Co-operation and Development (OECD), Education Database, 1998.

Table 15-4.—Percentage of first university degrees awarded in engineering: 1985–1995

Country	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1985–95 change[1]
Australia	—	—	7.4	7.1	6.9	—	5.7	5.3	6.1	5.4	5.6	—
Austria	7.7	7.4	7.6	8.2	8.9	9.0	9.5	—	—	9.8	9.9	2.2
Belgium	—	18.7	22.1	—	—	—	26.3	—	22.0	—	—	—
Canada	7.7	7.6	7.0	7.4	6.4	6.2	6.1	5.6	6.3	6.3	6.4	-1.3
Czech Republic	—	—	—	—	—	—	—	—	27.1	28.4	—	—
Denmark	16.2	20.0	20.4	23.2	19.6	21.7	21.4	15.6	15.2	—	17.0	0.8
Finland	25.3	23.7	23.9	20.5	21.0	23.4	23.7	—	24.2	25.1	26.3	1.0
France	—	—	—	—	—	—	—	—	16.1	—	—	—
Germany[2]	16.5	17.5	18.7	20.0	20.3	20.5	21.3	—	21.5	19.6	19.7	3.2
Greece	—	—	—	—	—	—	—	12.7	9.6	—	—	—
Hungary	—	—	—	—	—	—	—	—	17.6	—	17.9	—
Iceland	—	—	—	—	—	—	—	—	—	5.3	—	—
Ireland	12.0	12.6	11.5	11.9	13.7	13.7	11.6	12.3	11.7	—	10.7	-1.3
Italy	8.3	8.1	7.8	7.9	8.3	8.3	8.5	—	—	8.7	8.9	0.6
Japan[3]	20.3	20.6	20.9	21.0	21.2	21.0	21.1	19.9	19.4	19.3	19.3	-1.0
Korea	—	—	—	—	—	—	—	—	16.2	16.4	17.0	—
Luxembourg	—	—	—	—	—	—	—	—	—	—	—	—
Mexico	—	—	—	—	—	—	—	—	—	—	—	—
Netherlands	12.1	11.9	13.7	16.0	11.8	12.4	13.3	18.0	13.7	—	—	—
New Zealand	3.3	—	—	5.6	4.7	5.8	5.2	3.6	4.0	—	3.2	-0.1
Norway	—	—	8.8	8.6	12.4	10.2	9.9	16.2	14.2	14.2	13.2	—
Poland	—	—	—	—	—	—	—	—	16.1	—	—	—
Portugal	—	12.5	15.1	—	—	10.5	—	—	10.1	11.0	9.9	—
Russia[4]	—	—	—	—	—	—	—	—	—	20.4	—	—
Spain	7.0	6.8	6.6	6.7	6.4	6.7	7.1	—	7.8	—	9.4	2.4
Sweden	11.3	13.1	14.7	13.9	14.5	15.2	15.2	15.7	17.3	15.9	17.0	5.7
Switzerland	7.9	8.5	8.0	8.9	8.0	8.1	7.9	—	8.8	8.4	8.3	0.4
Turkey	17.8	15.9	16.6	15.3	14.2	13.8	14.1	15.1	13.9	—	13.1	-4.7
United Kingdom	—	—	—	—	—	—	—	14.1	13.5	12.8	—	—
United States	9.8	9.7	9.4	8.9	8.4	7.8	7.2	7.3	6.7	6.7	6.7	-3.1
Average[5]	—	—	—	—	—	—	—	—	—	—	—	—

— No data were reported or data were incomplete or inconsistent.

[1]Percentage points change between 1985 and 1995.

[2]Pre-1991 numbers refer to Western Germany (Federal Republic of Germany before unification).

[3]The percentage of first degrees that are in mathematics and computer science is included in the percent for first degrees in engineering.

[4]Not an OECD member country.

[5]Not enough countries reporting data for all years to compute reliable average.

NOTE: Countries in bold are G-7 countries. In the United States, first university degrees are equivalent to a bachelor's degree.

SOURCE: Organization for Economic Co-operation and Development (OECD), Education Database, 1998.

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Indicator 16: Educational attainment of the adult population

The educational attainment of a country's population age 25 to 64 reflects a combination of the availability of education in the country and individuals' pursuit of higher levels of education to improve their economic opportunities or achieve other personal goals. Changes in educational attainment over time are likely to capture a country's change in emphasis on a given level of education as well as changes in the importance individuals put on education. In a global economy in which the reward for skilled labor is high and increasing, individuals wishing to obtain higher incomes are likely to obtain more education.

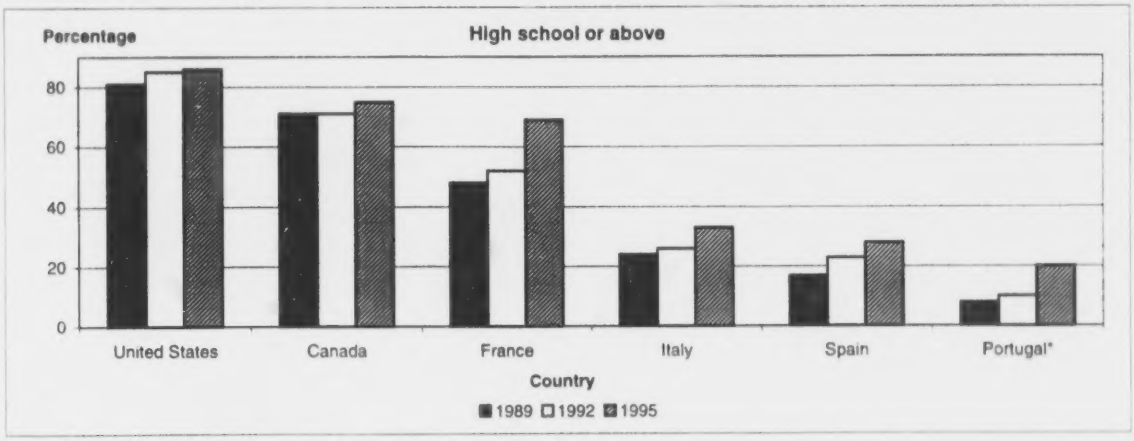
- Between 1989 and 1995, all but one OECD country reporting data experienced an increase in the percentage of the adult population with an upper secondary education or above. The largest increases occurred in France and Belgium. In addition to France, two other G-7 countries, the United Kingdom and Italy, witnessed increases of 11 and 9 percentage points, respectively. The United States and Canada observed more modest increases of 5 and 4 percentage points each, respectively.

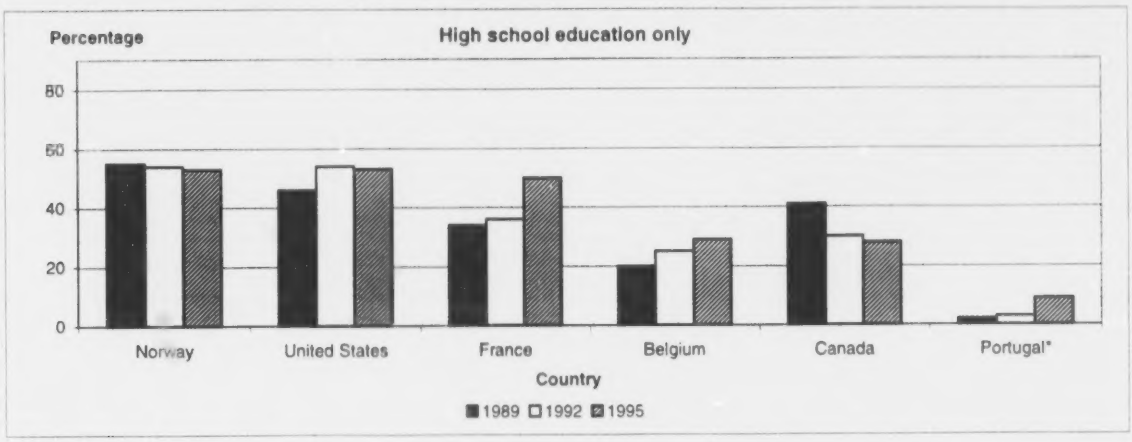
- Between 1989 and 1995, the percentage of adults with only an upper secondary education, equivalent to a high school diploma in the United States, increased in almost all the OECD countries reporting data. Although Portugal consistently reported the lowest percentage, it experienced a sizable change with an increase from 2 to 9 percent between 1989 and 1995. France and Belgium reported large increases of 16 and 9 percentage points respectively between 1989 and 1995. In contrast, Canada and Norway experienced declines of 13 and 2 percentage points respectively during the same period. In both these cases, the decline in the proportion of those with only an upper secondary education reflects an increase in the proportion of persons with higher levels of education. The United States reported a 7 percentage points increase in the percentage of the adult population who attained only an upper secondary education.

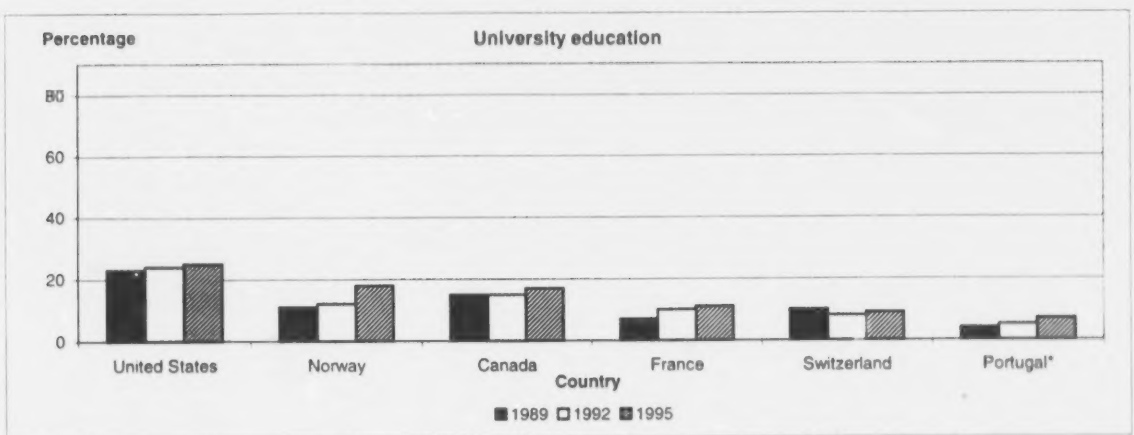
- Many of the OECD countries experienced an increase in the percent of their population with only a non-university higher education between 1989 and 1995 with some exceptions. Canada witnessed the largest increase, more than doubling its percentage of adults with only a non-university higher education. Belgium, Germany, Ireland, and Sweden experienced increases of at least 3 percentage points between 1989 and 1995. In contrast, Australia, the United States, and Switzerland experienced decreases of 11, 4, and 4 percentage points, respectively.

- All but two OECD countries experienced an increase in the percentage of their adult population who attained a university education between 1989 and 1995. The largest increase occurred in Norway with a 7 percentage points rise from 1989 to 1995. Australia, France and Belgium also reported increases of 4 percentage points. Among G-7 nations reporting data, the United States, Canada, and Italy experienced the lowest increases, although the United States consistently reported the highest percentage of the adult population with at least a university education.

Indicator 16.—Educational attainment of the the adult population: 1989, 1992, and 1995







*Data are from 1989, 1991, and 1995.
SOURCE: Organization for Economic Co-operation and Development (OECD), Network B Database, 1998.

Table 16-1.—Percentage of the adult population age 25–64, who attained at least a high school education: 1989–1995

Country	1989	1990	1991	1992	1993	1994	1995	1989-95 change[1]
Australia	56	—	56	—	53	50	53	-3
Austria	63	—	66	66	—	68	70	7
Belgium	37	—	44	45	—	49	54	17
Canada	71	—	76	71	—	74	75	4
Czech Republic	—	—	—	—	—	—	82	—
Denmark	—	—	62	59	—	60	66	—
Finland	58	—	60	61	—	64	66	8
France	48	—	50	52	—	67	69	21
Germany[2]	78	—	82	83	—	85	84	6
Greece	—	—	34	—	—	45	42	—
Hungary	—	—	—	—	—	—	—	—
Iceland	—	—	—	—	—	—	—	—
Ireland	37	—	40	42	—	46	47	10
Italy	24	—	26	26	—	32	33	9
Japan	—	—	—	—	—	—	—	—
Korea	—	—	—	—	—	—	58	—
Luxembourg	—	—	—	—	—	—	—	—
Mexico	—	—	—	—	—	—	—	—
Netherlands	—	45	56	56	—	57	59	—
New Zealand	—	43	56	57	—	57	59	—
Norway	78	—	78	79	—	80	82	4
Poland	—	—	—	—	—	—	74	—
Portugal	8	—	10	—	—	18	20	12
Russia[3]	—	—	—	—	—	—	—	—
Spain	17	—	20	23	—	26	28	11
Sweden	68	—	69	70	—	72	74	6
Switzerland	79	—	80	81	—	82	82	3
Turkey	—	—	17	14	—	18	21	—
United Kingdom	64	—	66	69	—	75	75	11
United States	81	—	84	85	—	85	86	5
Average[4]	—	—	—	—	—	—	—	—

— No data were reported or data were incomplete or inconsistent.

[1]Percentage points change between 1989 and 1995.

[2]The 1989 numbers refer to Western Germany (Federal Republic of Germany before unification).

[3]Not an OECD member country.

[4]Not enough countries reporting data for all years to compute reliable average.

NOTE: Countries in bold are G-7 countries.

SOURCE: Organization for Economic Co-operation and Development (OECD), Network B Database, 1998.

Table 16-2.—Percentage of the adult population age 25–64, who attained only a high school education: 1989–1995

Country	1989	1990	1991	1992	1993	1994	1995	1989–95 change[1]
Australia	25	—	25	—	30	27	29	4
Austria	59	—	61	61	—	60	62	3
Belgium	20	—	24	25	—	27	29	9
Canada	41	—	36	30	—	28	28	-13
Czech Republic	—	—	—	—	—	—	73	—
Denmark	—	—	43	40	—	40	44	—
Finland	40	—	42	43	—	44	45	5
France	34	—	35	36	—	50	50	16
Germany[2]	61	—	60	61	—	62	61	0
Greece	—	—	21.	—	—	27	25	—
Hungary	—	—	—	—	—	—	—	—
Iceland	—	—	—	—	—	—	—	—
Ireland	23	—	24	25	—	27	27	4
Italy	20	—	22	22	—	26	27	7
Japan	—	—	—	—	—	—	—	—
Korea	—	—	—	—	—	—	42	—
Luxembourg	—	—	—	—	—	—	—	—
Mexico	—	—	—	—	—	—	—	—
Netherlands	—	36	37	37	—	38	39	—
New Zealand	—	25	33	33	—	34	34	—
Norway	55	—	54	54	—	53	53	-2
Poland	—	—	—	—	—	—	61	—
Portugal	2	—	3	—	—	8	9	7
Russia[3]	—	—	—	—	—	—	—	—
Spain	10	—	12	10	—	11	12	2
Sweden	44	—	44	46	—	46	46	2
Switzerland	53	—	60	60	—	61	61	8
Turkey	—	—	11	9	—	13	15	—
United Kingdom	48	—	49	50	—	54	54	6
United States	46	—	47	54	—	53	53	7
Average[4]	—	—	—	—	—	—	—	—

— No data were reported or data were incomplete or inconsistent.
[1]Percentage points change between 1989 and 1995.
[2]The 1989 numbers refer to Western Germany (Federal Republic of Germany before unification).
[3]Not an OECD member country.
[4]Not enough countries reporting data for all years to compute reliable average.
NOTE: Countries in bold are G-7 countries.
SOURCE: Organization for Economic Co-operation and Development (OECD), Network B Database, 1998.

Table 16-3.—Percentage of the adult population age 25–64, who attained only a non-university higher education: 1989–1995

Country	1989	1990	1991	1992	1993	1994	1995	1989-95 change[1]
Australia	21	—	21	—	11	10	10	-11
Austria	(2)	—	(2)	(2)	—	2	2	—
Belgium	10	—	10	11	—	12	14	4
Canada	15	—	23	26	—	29	30	15
Czech Republic	—	—	—	—	—	—	(2)	—
Denmark	—	—	6	6	—	6	7	—
Finland	8	—	8	8	—	9	9	1
France	7	—	5	6	—	8	8	1
Germany[3]	7	—	11	10	—	10	10	3
Greece	—	—	3	—	—	6	6	—
Hungary	—	—	—	—	—	—	—	—
Iceland	—	—	—	—	—	—	—	—
Ireland	7	—	8	9	—	10	10	3
Italy	(2)	—	(2)	(2)	—	(2)	(2)	—
Japan	—	—	—	—	—	—	—	—
Korea	—	—	—	—	—	—	(2)	--
Luxembourg	—	—	—	—	—	—	—	—
Mexico	—	—	—	—	—	—	—	—
Netherlands	—	13	13	(2)	—	(2)	(2)	—
New Zealand	—	—	13	13	—	14	15	—
Norway	12	—	12	13	—	11	11	-1
Poland	—	—	—	—	—	—	3	—
Portugal	2	—	2	—	—	3	4	2
Russia[4]	—	—	—	—	—	—	—	—
Spain	(2)	—	(2)	3	—	4	4	—
Sweden	11	—	12	12	—	14	14	3
Switzerland	16	—	13	13	—	13	12	-4
Turkey	—	—	0	0	—	(2)	(2)	—
United Kingdom	7	—	7	8	—	9	9	2
United States	12	—	13	7	—	8	8	-4
Average[5]	—	—	—	—	—	—	—	—

— No data were reported or data were incomplete or inconsistent.
[1]Percentage points change between 1989 and 1995.
[2]Data were included in another category.
[3]The 1989 numbers refer to Western Germany (Federal Republic of Germany before unification).
[4]Not an OECD member country.
[5]Not enough countries reporting data for all years to compute reliable average.
NOTE: Countries in bold are G-7 countries.
SOURCE: Organization for Economic Co-operation and Development (OECD), Network B Database, 1998.

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Table 16-4.—Percentage of the adult population age 25–64, who attained at least university education: 1989–1995

Country	1989	1990	1991	1992	1993	1994	1995	1989–95 change[1]
Australia	10	—	10	—	12	13	14	4
Austria	[2] 6	—	[2] 7	[2] 7	—	6	6	0
Belgium	7	—	10	9	—	10	11	4
Canada	15	—	17	15	—	17	17	2
Czech Republic	—	—	—	—	—	—	[2] 11	—
Denmark	—	—	13	13	—	14	15	—
Finland	10	—	10	10	—	11	12	2
France	7	—	10	10	—	9	11	4
Germany[3]	10	—	11	12	—	13	13	3
Greece	—	—	10	—	—	12	11	—
Hungary	—	—	—	—	—	—	—	—
Iceland	—	—	—	—	—	—	—	—
Ireland	7	—	8	8	—	9	10	3
Italy	[2] 6	—	[2] 6	[2] 6	—	[2] 8	[2] 8	2
Japan	—	—	—	—	—	—	—	—
Korea	—	—	—	—	—	—	[2] 18	—
Luxembourg	—	—	—	—	—	—	—	—
Mexico	—	—	—	—	—	—	—	—
Netherlands	—	6	6	21	—	21	22	—
New Zealand	—	9	10	11	—	9	10	—
Norway	11	—	12	12	—	16	18	7
Poland	—	—	—	—	—	—	10	—
Portugal	4	—	5	—	—	7	7	3
Russia[4]	—	—	—	—	—	—	—	—
Spain	[2] 9	—	[2] 10	10	—	11	12	3
Sweden	13	—	13	12	—	12	14	1
Switzerland	10	—	7	8	—	8	9	-1
Turkey	—	—	6	5	—	[2] 7	[2] 8	—
United Kingdom	9	—	10	11	—	12	12	3
United States	23	—	24	24	—	24	25	2
Average[5]	—	—	—	—	—	—	—	—

— No data were reported or data were incomplete or inconsistent.

[1]Percentage points change between 1989 and 1995.

[2]Data include non-university tertiary education.

[3]The 1989 numbers refer to Western Germany (Federal Republic of Germany before unification).

[4]Not an OECD member country.

[5]Not enough countries reporting data for all years to compute reliable average.

NOTE: Countries in bold are G-7 countries. In the United States, first university degrees are equivalent to a bachelor's degree.

SOURCE: Organization for Economic Co-operation and Development (OECD), Network B Database, 1998.

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PART V: LABOR MARKET OUTCOMES

Indicator 17: Unemployment, labor force participation, and educational attainment

The unemployment rate is an important indicator of the overall health of the economy. It is defined here as the proportion of adults 15 to 64 years old who are without work but are seeking and currently available for work as a percentage of the total labor force. Combating unemployment is a key priority in the United States, as in most industrialized countries. Change over time in unemployment rates at various levels of education may reflect change in the overall state of a country's economy as well the fit between the skill composition of a country's population and that country's skill need.

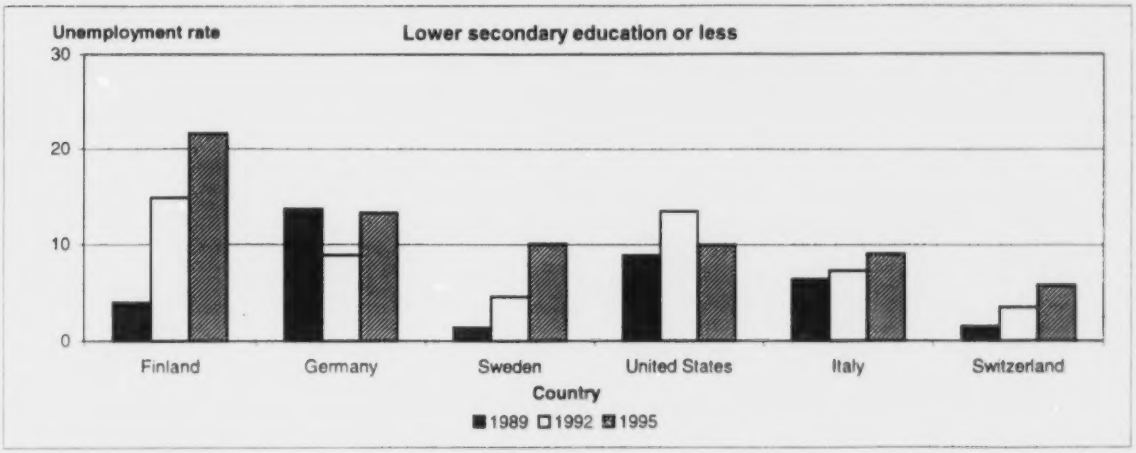
This indicator also provides information on the relationship between educational attainment and participation in the labor force, which consists of people who are either employed or actively seeking work. Variation in labor force participation by levels of educational attainment reflects the impact of formal education on employment opportunities. Due to lack of availability of labor force participation data, only one year of data is presented.

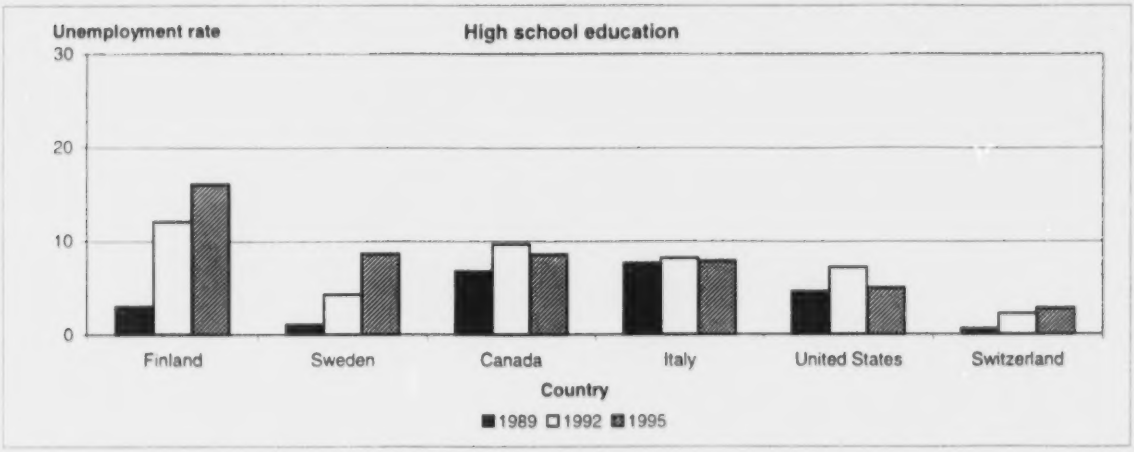
- Although overall labor force participation rates vary between countries, there is a positive relationship between the level of educational attainment and labor force participation in almost all countries. The difference between the labor force participation rates of high school graduates and those with a lower secondary education or less is, on average, 16 percentage points across all OECD countries reporting data in 1995. The difference between high school graduates and university graduates is about 9 percentage points. Labor force participation rates for the United States are close to the OECD averages.

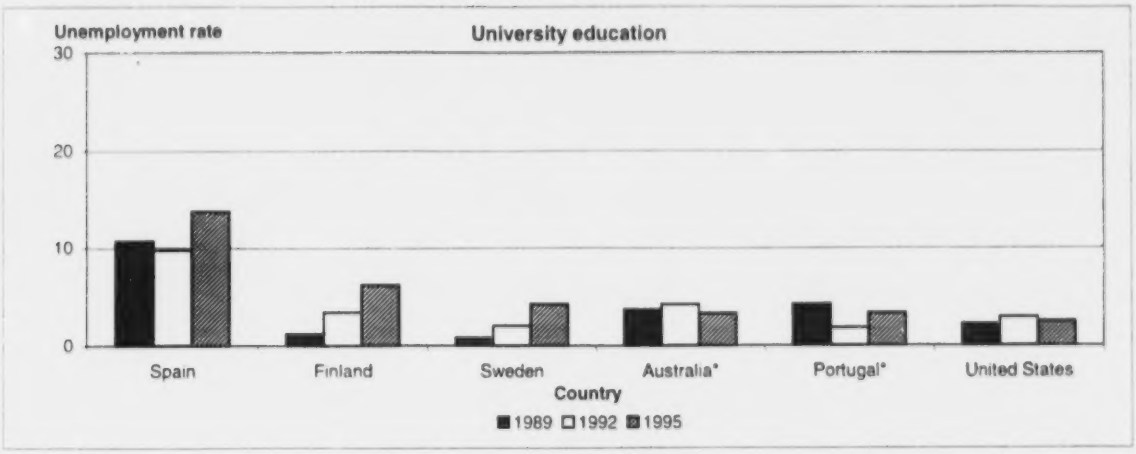
- While unemployment rates also vary by country, there is a negative relationship between higher levels of educational attainment and unemployment in almost all countries. On average, across all OECD countries reporting data in 1995, university graduates have unemployment rates lower than their counterparts with a lower secondary education or less. University graduates also tend to have lower unemployment rates than high school graduates in the vast majority of OECD countries.

- Between 1989 and 1995, unemployment rates increased in the vast majority of OECD countries across all educational attainment levels. Sweden and Finland experienced the largest increases in unemployment rates across all levels of educational attainment, except for France at the university level. Among G-7 countries, France experienced the largest increases in unemployment for all levels of education. In contrast, the United States had the smallest G-7 increase in unemployment at each level of educational attainment above the lower secondary level.

Indicator 17.—Unemployment by highest education attainment: 1989, 1992, and 1995







*Data are from 1989, 1991, and 1995.
SOURCE: Organization for Economic Co-operation and Development (OECD), Network B Database, 1998.

Table 17-1.—Labor force participation (1995) and unemployment rate of persons aged 25–64 with lower secondary education or less: 1989–1995

Country	Labor force participation rate	Unemployment rate							
	1995	1989	1990	1991	1992	1993	1994	1995	1989–95 change[1]
Australia	66	7.3	—	9.1	—	11.2	10.2	8.5	1.2
Austria	59	3.6	—	4.8	5.6	—	4.9	5.7	2.1
Belgium	55	11.1	—	11.8	13.0	—	12.5	13.4	2.3
Canada	61	10.0	—	14.1	15.2	—	14.3	13.0	3.0
Czech Republic	60	—	—	—	—	—	—	7.7	—
Denmark	72	—	—	14.2	15.6	—	17.3	14.6	—
Finland	69	4.0	—	8.6	14.9	—	22.7	21.6	17.6
France	60	11.0	—	10.6	12.1	—	14.7	14.0	3.0
Germany[2]	57	13.7	—	10.0	8.9	—	13.9	13.3	-0.4
Greece	60	—	—	—	—	—	6.2	6.3	—
Hungary	—	—	—	—	—	—	—	—	—
Iceland	—	—	—	—	—	—	—	—	—
Ireland	58	20.9	—	20.3	19.8	—	18.9	16.4	-4.5
Italy	54	6.4	—	5.7	7.3	—	8.4	9.1	2.7
Japan	—	—	—	—	—	—	—	—	—
Korea	72	—	—	—	—	—	—	1.0	—
Luxembourg	59	—	—	—	—	—	—	—	—
Mexico	—	—	—	—	—	—	—	—	—
Netherlands	57	—	9.7	8.6	8.0	—	8.2	7.9	—
New Zealand	68	—	8.1	10.9	11.2	—	—	6.7	—
Norway	65	6.3	—	6.7	7.1	—	6.5	6.5	0.2
Poland	58	—	—	—	—	—	—	13.9	—
Portugal	72	4.0	—	5.3	—	—	6.0	6.2	2.2
Russia[3]	—	—	—	—	—	—	—	—	—
Spain	58	13.3	—	13.7	16.0	—	21.3	20.6	7.3
Sweden	86	1.4	—	2.6	4.6	—	8.8	10.1	8.7
Switzerland	71	1.5	—	1.3	3.5	—	5.1	5.8	4.3
Turkey	67	—	—	5.7	5.1	—	6.0	4.8	—
United Kingdom	62	9.8	—	10.4	12.3	—	13.0	12.2	2.4
United States	60	8.9	—	12.3	13.5	—	12.6	10.0	1.1
Average[4]	64	—	—	—	—	—	—	—	—

— No data were reported or data were incomplete or inconsistent.

[1]Percentage points change between 1989 and 1995.

[2]The 1989 numbers refer to Western Germany (Federal Republic of Germany before unification).

[3]Not an OECD member country.

[4]Not enough countries reporting data for all years to compute reliable unemployment rate averages.

NOTE: Countries in bold are G-7 countries.

SOURCE: Organization for Economic Co-operation and Development (OECD), Network B Database, 1998.

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Table 17-2.—Labor force participation (1995) and unemployment rate of persons aged 25–64 with upper secondary education only: 1989–1995

Country	Labor force participation rate	Unemployment rate							
	1995	1989	1990	1991	1992	1993	1994	1995	1989–95 change[1]
Australia	81	4.2	—	6.0	—	8.9	6.9	6.2	2.0
Austria	79	2.4	—	3.1	3.2	—	2.8	2.9	0.5
Belgium	78	4.7	—	4.2	4.7	—	7.1	7.5	2.8
Canada	79	6.8	—	9.5	9.7	—	9.0	8.6	1.8
Czech Republic	84	—	—	—	—	—	—	2.1	—
Denmark	88	—	—	9.1	9.1	—	10.0	8.3	—
Finland	85	3.0	—	7.0	12.1	—	16.4	16.1	13.1
France	83	6.6	—	6.6	7.4	—	10.5	9.9	3.3
Germany[2]	77	6.8	—	6.3	6.4	—	8.8	7.9	1.1
Greece	68	—	—	—	—	—	8.7	9.0	—
Hungary	—	—	—	—	—	—	—	—	—
Iceland	—	—	—	—	—	—	—	—	—
Ireland	72	6.6	—	7.3	9.3	—	9.7	7.6	1.0
Italy	76	7.7	—	7.2	8.2	—	7.5	7.9	0.2
Japan	—	—	—	—	—	—	—	—	—
Korea	72	—	—	—	—	—	—	1.6	—
Luxembourg	77	—	—	—	—	—	—	—	—
Mexico	—	—	—	—	—	—	—	—	—
Netherlands	78	—	4.8	4.6	4.4	—	4.8	4.8	—
New Zealand	85	—	4.9	7.4	7.5	—	—	3.3	—
Norway	84	3.7	—	4.4	4.9	—	4.7	4.0	0.3
Poland	79	—	—	—	—	—	—	11.4	—
Portugal	82	4.7	—	4.5	—	—	6.2	6.4	1.7
Russia[3]	—	—	—	—	—	—	—	—	—
Spain	80	13.1	—	12.2	14.1	—	19.4	18.5	5.4
Sweden	91	1.1	—	2.3	4.3	—	7.6	8.7	7.6
Switzerland	82	0.6	—	1.5	2.2	—	3.4	2.8	2.2
Turkey	68	—	—	7.2	6.7	—	7.1	6.9	—
United Kingdom	82	5.8	—	6.5	8.3	—	8.3	7.4	1.6
United States	79	4.6	—	6.5	7.2	—	6.2	5.0	0.4
Average[4]	80	—	—	—	—	—	—	—	—

— No data were reported or data were incomplete or inconsistent.
[1]Percentage points change between 1989 and 1995.
[2]The 1989 numbers refer to Western Germany (Federal Republic of Germany before unification).
[3]Not an OECD member country.
[4]Not enough countries reporting data for all years to compute reliable unemployment rate averages.
NOTE: Countries in bold are G-7 countries.
SOURCE: Organization for Economic Co-operation and Development (OECD), Network B Database, 1998.

Table 17-3.—Labor force participation (1995) and unemployment rate of persons aged 25–64 with non-university higher education: 1989–1995

Country	Labor force participation rate	Unemployment rate							
	1995	1989	1990	1991	1992	1993	1994	1995	1989-95 change[1]
Australia	84	4.6	—	6.6	—	5.7	5.4	5.1	0.5
Austria	86	—	—	—	—	—	1.3	1.4	—
Belgium	85	2.7	—	2.3	2.3	—	3.4	3.5	0.8
Canada	84	5.0	—	7.8	9.0	—	8.5	7.5	2.5
Czech Republic	—	—	—	—	—	—	—	—	—
Denmark	92	—	—	5.7	5.8	—	6.0	5.3	—
Finland	85	1.6	—	2.9	5.7	—	11.1	9.7	8.1
France	89	3.4	—	3.6	4.6	—	7.6	5.9	2.5
Germany[2]	87	3.6	—	4.4	4.5	—	5.9	5.2	1.6
Greece	84	—	—	—	—	—	10.0	10.1	—
Hungary	—	—	—	—	—	—	—	—	—
Iceland	—	—	—	—	—	—	—	—	—
Ireland	85	3.9	—	4.9	5.8	—	6.4	5.0	1.1
Italy	—	—	—	—	—	—	—	—	—
Japan	—	—	—	—	—	—	—	—	—
Korea	—	—	—	—	—	—	—	—	—
Luxembourg	—	—	—	—	—	—	—	—	—
Mexico	—	—	—	—	—	—	—	—	—
Netherlands	—	—	4.6	2.2	—	—	—	—	—
New Zealand	81	—	5.1	5.3	4.7	—	—	3.6	—
Norway	88	2.2	—	2.3	2.8	—	3.6	3.4	1.2
Poland	86	—	—	—	—	—	—	6.9	—
Portugal	88	5.6	—	1.9	—	—	2.7	3.1	-2.5
Russia[3]	—	—	—	—	—	—	—	—	—
Spain	88	—	—	—	12.5	—	18.5	16.6	—
Sweden	92	0.9	—	1.1	2.3	—	3.9	4.8	3.9
Switzerland	92	0.3	—	0.8	2.3	—	2.5	1.5	1.2
Turkey	—	—	—	—	—	—	—	—	—
United Kingdom	86	2.8	—	3.7	3.3	—	3.9	4.1	1.3
United States	86	3.3	—	4.5	4.6	—	4.3	3.6	0.3
Average[4]	87	—	—	—	—	—	—	—	—

— No data were reported or data were incomplete or inconsistent.

[1]Percentage points change between 1989 and 1995.

[2]The 1989 numbers refer to Western Germany (Federal Republic of Germany before unification).

[3]Not an OECD member country.

[4]Not enough countries reporting data for all years to compute reliable unemployment rate averages.

NOTE: Countries in bold are G-7 countries.

SOURCE: Organization for Economic Co-operation and Development (OECD), Network B Database, 1998.

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Table 17-4.—Labor force participation (1995) and unemployment rate of persons aged 25–64 with at least university education: 1989–1995

Country	Labor force participation rate	Unemployment rate							
	1995	1989	1990	1991	1992	1993	1994	1995	1989-95 change[1]
Australia	89	3.7	—	4.2	—	4.4	3.9	3.3	-0.4
Austria	91	1.4	—	1.5	1.3	—	1.8	2.1	0.7
Belgium	89	2.0	—	1.7	2.2	—	4.0	3.6	1.6
Canada	89	3.6	—	5.1	5.2	—	5.2	4.6	1.0
Czech Republic	93	—	—	—	—	—	—	0.7	—
Denmark	93	—	—	4.6	4.8	—	5.0	4.3	—
Finland	92	1.2	—	2.1	3.4	—	6.6	6.2	5.0
France	87	3.0	—	3.8	4.4	—	6.1	7.0	4.0
Germany[2]	90	4.5	—	4.3	3.7	—	4.9	4.7	0.2
Greece	87	—	—	—	—	—	6.5	7.1	—
Hungary	—	—	—	—	—	—	—	—	—
Iceland	—	—	—	—	—	—	—	—	—
Ireland	88	2.6	—	3.4	3.3	—	3.4	3.4	0.8
Italy	87	4.8	—	5.0	6.0	—	6.4	7.3	2.5
Japan	—	—	—	—	—	—	—	—	—
Korea	82	—	—	—	—	—	—	2.0	—
Luxembourg	89	—	—	—	—	—	—	—	—
Mexico	—	—	—	—	—	—	—	—	—
Netherlands	86	—	—	—	2.0	—	4.3	4.1	—
New Zealand	89	—	2.9	4.2	3.8	—	—	2.6	—
Norway	93	1.0	—	1.6	1.8	—	1.5	1.7	0.7
Poland	87	—	—	—	—	—	—	2.8	—
Portugal	94	4.2	—	1.8	—	—	2.4	3.3	-0.9
Russia[3]	—	—	—	—	—	—	—	—	—
Spain	87	10.7	—	9.3	9.8	—	13.8	13.8	3.1
Sweden	94	0.8	—	1.1	2.0	—	3.4	4.2	3.4
Switzerland	92	0.8	—	2.2	3.0	—	3.7	2.6	1.8
Turkey	77	—	—	3.1	4.0	—	4.1	3.3	—
United Kingdom	91	2.4	—	3.1	3.6	—	3.9	3.5	1.1
United States	89	2.2	—	2.9	2.9	—	2.9	2.5	0.3
Average[4]	89	—	—	—	—	—	—	—	—

— No data were reported or data were incomplete or inconsistent.
[1]Percentage points change between 1989 and 1995.
[2]The 1989 numbers refer to Western Germany (Federal Republic of Germany before unification).
[3]Not an OECD member country.
[4]Not enough countries reporting data for all years to compute reliable unemployment rate averages.
NOTE: Countries in bold are G-7 countries.
SOURCE: Organization for Economic Co-operation and Development (OECD), Network B Database, 1998.

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Indicator 18: Earnings and educational attainment

Annual earnings reflect not only the market valuation of the economic contribution an individual makes to society, but are also a direct link to one's socioeconomic status. Examining the average annual earnings for individuals with various levels of educational attainment informs us about the relationship between education and earnings. Earnings differentials also serve as a measure of the current financial incentives in a particular country for an individual to invest in further education.

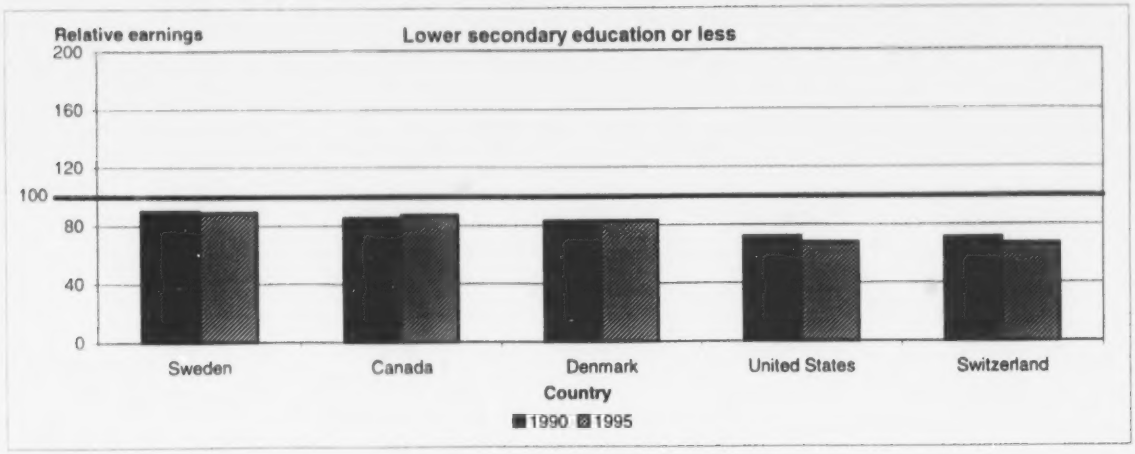
Relative earnings from employment are defined as the mean earnings (income from work before taxes) of 25- to 64-year-olds at a given level of educational attainment divided by the mean earnings of persons with an upper secondary school education. This ratio is then multiplied by 100. Thus, by definition, the ratio for those with a high school education is 100. The estimates are restricted to persons with income from employment during the reference period.

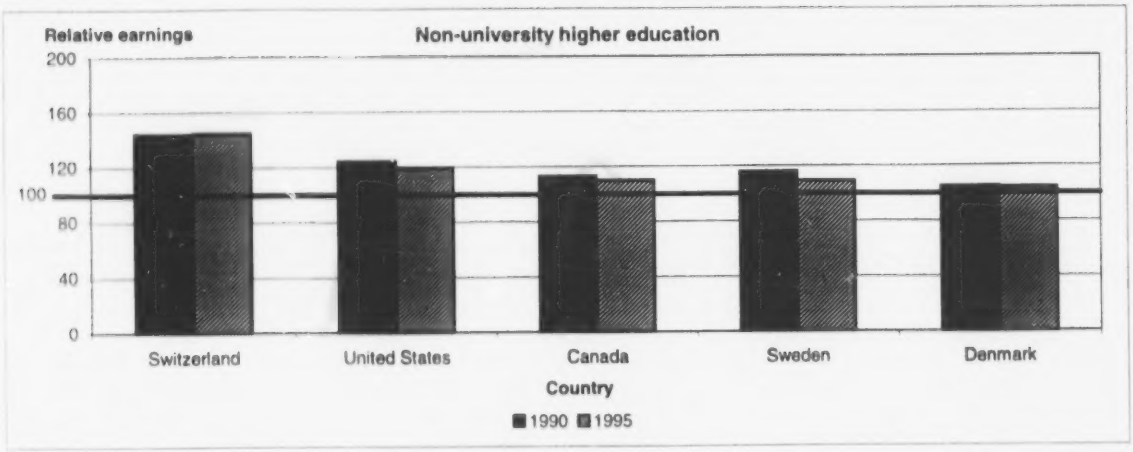
- There is a strong positive relationship between educational attainment and earnings. University-level graduates earn substantially more than upper secondary graduates in all OECD countries reporting data. By the same token, persons with less than an upper secondary education earn less than upper secondary graduates.

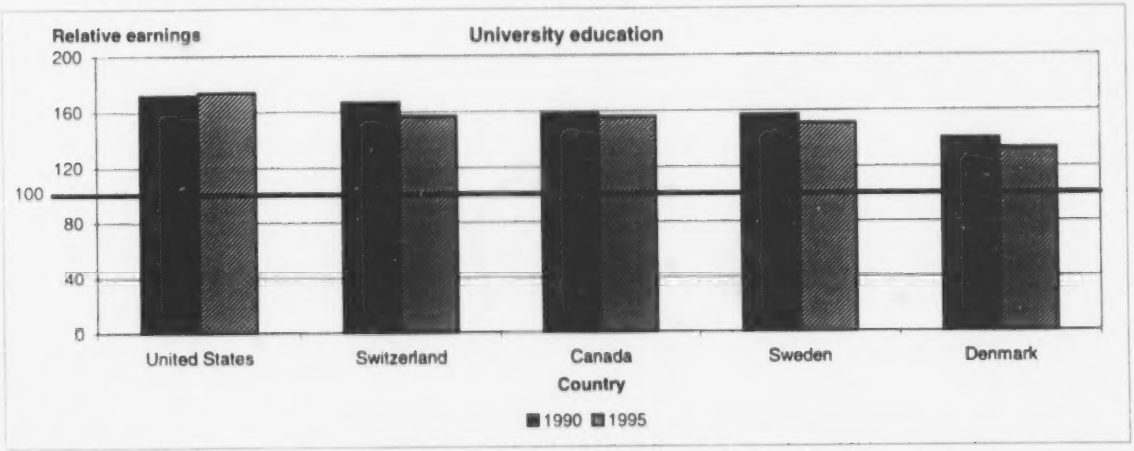
- The 5 OECD countries reporting enough data to compute a change score, Canada, Denmark, Sweden, Switzerland, and the United States, shared a slight overall drop in relative earnings at all educational levels between 1990 and 1995.

- Non-university tertiary education in most countries reporting data yields a considerably smaller earnings advantage than university education. The advantage of non-university tertiary education over upper secondary education in 1995 ranged from 4 percent in Denmark to 45 percent in Switzerland. On the other hand, the advantage of a university education over an upper secondary education in 1995 ranged from 33 percent in Denmark to 79 percent in the United Kingdom. Among G-7 nations reporting data in 1995, the United Kingdom, the United States, and France all reported an earnings advantage of around 75 percent for people with a university degree over an upper secondary education. This was a higher ratio than reported for Germany (63 percent), Canada (56 percent), or Italy (34 percent).

Indicator 18.—Earnings and educational attainment: 1990 and 1995







SOURCE: Organization for Economic Co-operation and Development (OECD), Network B Database, 1998.

Table 18-1.—Relative earnings of persons aged 25–64 with lower secondary or less attainment (upper secondary=100): 1990–1995

Country	1990	1991	1992	1993	1994	1995	1990-95 change[1]
Australia	—	79	—	77	—	89	—
Austria	—	81	—	—	—	—	—
Belgium	—	—	—	—	—	—	—
Canada	85	83	—	—	84	87	2
Czech Republic	—	—	—	—	—	66	—
Denmark	83	84	—	84	—	83	0
Finland	95	94	—	93	93	—	—
France	—	—	84	—	79	80	—
Germany	—	—	79	—	83	78	—
Greece	—	—	—	—	—	—	—
Hungary	—	—	—	—	—	—	—
Iceland	—	—	—	—	—	—	—
Ireland	—	—	—	85	—	—	—
Italy	—	—	—	76	—	77	—
Japan	—	—	—	—	—	—	—
Korea	—	—	—	—	—	—	—
Luxembourg	—	—	—	—	—	—	—
Mexico	—	—	—	—	—	—	—
Netherlands	—	—	79	78	77	—	—
New Zealand	—	78	73	—	66	82	—
Norway	—	82	80	80	—	82	—
Poland	—	—	—	—	—	—	—
Portugal	—	68	—	68	68	—	—
Russia[2]	—	—	—	—	—	—	—
Spain	—	80	—	77	—	—	—
Sweden	90	—	92	92	—	89	-1
Switzerland	71	—	69	—	67	67	-4
Turkey	—	—	—	—	—	—	—
United Kingdom	—	—	85	—	77	75	—
United States	72	—	68	66	—	68	-4
Average[3]	—	—	—	—	—	—	—

— No data were reported or data were incomplete or inconsistent.

[1]Percentage points change between 1990 and 1995.

[2]Not an OECD member country.

[3]Not enough countries reporting data for all years to compute reliable average.

NOTE: Countries in bold are G-7 countries. Relative earning from employment is defined as the mean earnings (income from work before taxes) of persons at a given highest level of educational attainment divided by the mean earnings of persons with upper secondary school attainment. This ratio is then multiplied by 100. For example, in 1995, Australians between the ages of 25 and 64 with an education attainment of lower secondary or less earned an average of 89 percent of their counterparts' salaries with an upper secondary degree.

SOURCE: Organization for Economic Co-operation and Development (OECD), Network B Database, 1998.

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Table 18-2.—Relative earnings of persons aged 25–64 with non-university tertiary attainment (upper secondary=100): 1990–1995

Country	1990	1991	1992	1993	1994	1995	1990–95 change[1]
Australia	—	103	—	110	—	111	—
Austria	—	—	—	—	—	—	—
Belgium	—	—	—	—	—	—	—
Canada	113	112	—	—	112	110	-3
Czech Republic	—	—	—	—	—	—	—
Denmark	105	106	—	105	—	104	-1
Finland	131	132	—	128	126	—	—
France	—	—	125	—	128	128	—
Germany	—	—	116	—	114	111	—
Greece	—	—	—	—	—	—	—
Hungary	—	—	—	—	—	—	—
Iceland	—	—	—	—	—	—	—
Ireland	—	—	—	123	—	—	—
Italy	—	—	—	—	—	—	—
Japan	—	—	—	—	—	—	—
Korea	—	—	—	—	—	—	—
Luxembourg	—	—	—	—	—	—	—
Mexico	—	—	—	—	—	—	—
Netherlands	—	—	—	—	124	—	—
New Zealand	—	94	94	—	104	106	—
Norway	—	131	129	129	—	123	—
Poland	—	—	—	—	—	—	—
Portugal	—	110	—	111	—	—	—
Russia[2]	—	—	—	—	—	—	—
Spain	—	—	—	97	—	—	—
Sweden	116	—	116	115	—	109	-7
Switzerland	144	—	143	—	146	145	1
Turkey	—	—	—	—	—	—	—
United Kingdom	—	—	124	—	134	132	—
United States	124	—	121	118	—	119	-5
Average[3]	—	—	—	—	—	—	—

— No data were reported or data were incomplete or inconsistent.

[1]Percentage points change between 1990 and 1995.

[2]Not an OECD member country.

[3]Not enough countries reporting data for all years to compute reliable average.

NOTE: Countries in bold are G-7 countries. Relative earning from employment is defined as the mean earnings (income from work before taxes) of persons at a given highest level of educational attainment divided by the mean earnings of persons with upper secondary school attainment. This ratio is then multiplied by 100. For example, in 1995, Australians between the ages of 25 and 64 with a non-university tertiary degree earned an average of 11 percent more than their counterparts' salaries with an upper secondary degree.

SOURCE: Organization for Economic Co-operation and Development (OECD), Network B Database, 1998.

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Table 18-3.—Relative earnings of persons aged 25–64 with at least university education attainment (upper secondary=100): 1990–1995

Country	1990	1991	1992	1993	1994	1995	1990–95 change[1]
Australia	—	158	—	137	—	142	—
Austria	—	141	—	—	—	—	—
Belgium	—	—	—	—	—	—	—
Canada	158	171	—	—	158	156	-2
Czech Republic	—	—	—	—	—	158	—
Denmark	140	140	—	137	—	133	-7
Finland	189	191	—	190	187	—	—
France	—	—	161	—	179	175	—
Germany	—	—	179	—	172	163	—
Greece	—	—	—	—	—	—	—
Hungary	—	—	—	—	—	—	—
Iceland	—	—	—	—	—	—	—
Ireland	—	—	—	183	—	—	—
Italy	—	127	—	129	—	134	—
Japan	—	—	—	—	—	—	—
Korea	—	—	—	—	—	—	—
Luxembourg	—	—	—	—	—	—	—
Mexico	—	—	—	—	—	—	—
Netherlands	—	—	135	136	162	—	—
New Zealand	—	139	136	—	168	165	—
Norway	—	168	171	159	—	149	—
Poland	—	—	—	—	—	—	—
Portugal	—	186	—	190	183	—	—
Russia[2]	—	—	—	—	—	—	—
Spain	—	138	—	140	—	—	—
Sweden	157	—	160	163	—	151	-6
Switzerland	167	—	167	—	160	157	-10
Turkey	—	—	—	—	—	—	—
United Kingdom	—	—	179	—	191	179	—
United States	172	—	169	174	—	174	2
Average[3]	—	—	—	—	—	—	—

— No data were reported or data were incomplete or inconsistent.

[1]Percentage points change between 1990 and 1995.

[2]Not an OECD member country.

[3]Not enough countries reporting data for all years to compute reliable average.

NOTE: Countries in bold are G-7 countries. Relative earning from employment is defined as the mean earnings (income from work before taxes) of persons at a given highest level of educational attainment divided by the mean earnings of persons with upper secondary school attainment. This ratio is then multiplied by 100. For example, in 1995, Australians between the ages of 25 and 64 with a university degree earned an average of 42 percent more than their counterparts' salaries with an upper secondary degree.

SOURCE: Organization for Economic Co-operation and Development (OECD), Network B Database, 1998.

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SUPPLEMENTAL NOTES AND TABLES

SUPPLEMENTAL NOTES AND TABLES

Notes for Table 1:

OECD in Figures, 1997 reports total area in thousands square kilometers. For ease of interpretation by a U.S. audience, we transformed this variable into square miles by multiplying a country's total area in square kilometers by .390625.

Notes for Table 3-1:

GDP per capita in constant 1995 U.S. dollars is calculated as follows:

1. GDP per capita in the national currency is obtained by dividing a country's GDP by its total population.

2. The results obtained in step 1 are then converted into equivalent U.S. dollars by dividing them by the purchasing-power-parity (PPP) exchange rate between a country's national currency and the U.S. dollar. The PPP rate used for this purpose is the OECD-developed rate pertaining to GDP for each individual year. Thus, GDP per capita is expressed in current U.S. dollars.

3. Based on the U.S. consumer price index for urban areas (CPI-U), a series of price-inflators is derived by dividing 1995 CPI-U by each year's CPI-U.

4. By multiplying each prior year's GDP per capita in current U.S. dollars by the price-inflators developed in step 3, GDP per capita in current U.S. dollars are converted into 1995 constant U.S. dollars.

Table S-1 lists the yearly PPP exchange rates that were applied in these conversions. Listed below are the price inflators (based on the Consumer Price Index for all urban consumers) that were used to convert current dollars to 1995 dollars:

1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
1.4164	1.3905	1.3415	1.2883	1.2290	1.1660	1.1189	1.0862	1.0547	1.0283	1.000

Source: Department of Labor, Bureau of Labor Statistics.

Notes for Tables 4-1 to 4-4:

In a few countries, the participation rates for 5- to 13-year-olds and 14- to 17-year-olds are higher than 100 because the numerator (the number of students enrolled) and the denominator (the population cohort) are derived from different sources. Usually, the denominator is based upon demographic projections while the numerator is based on actual head counts.

Notes for Tables 6-1 to 6-4:

Upper secondary education, equivalent to high school education in the United States, includes varying age cohorts in different OECD countries. To illustrate, in the United States, the typical age range for high school students is 15 to 17, while in countries like France and the former West Germany, the typical age range for upper secondary students is 16 to 18. For more information regarding such differences, please refer to Section IV, "Annotated organization charts of education systems," in *Education at a Glance: OECD Indicators*, 3rd edition, 1995.

In a few countries, the participation rate of 16-year-olds in upper secondary institutions is higher than 100 because the numerator (the number of students enrolled) and the denominator (the population cohort) are derived from different sources. Usually, the denominator is based upon demographic projections while the numerator is based on actual head counts.

Notes for Tables 8-1 to 8-4:

There was a revision to the OECD questionnaire on finance data implemented in 1992. Before 1992, public direct expenditures for educational institutions also included transfers and payments to private entities. These transfers and payments to private entities include financial aid to students/households (in the form of loans, scholarships, and grants—this represents the bulk of "transfers and payments to private entities") as well as transfers and payments to private entities other than students/households. Starting in 1992, transfers and payments to private entities were excluded from public direct expenditures. As a result of this revision, pre- and post-1992 finance figures may not be strictly comparable. The data presented in Table S-2 illustrates the modest impact this revision might have had on the trends reported in Indicator 8. Because of incomplete reporting, it is likely that many countries did not report these funds in earlier years.

Notes for Tables 9-1 to 9-4:

Direct expenditures per student from public sources in constant 1995 U.S. dollars is calculated as follows:

1. Direct public expenditures per student in the national currency are obtained by dividing direct public education expenditures at a given education level by the number of full-time and part-time students enrolled in both public and private schools at the same education level.

2. The results obtained in step 1 are then converted into equivalent U.S. dollars by dividing them by the purchasing-power-parity (PPP) exchange rate between a country's national currency and the U.S. dollar. The PPP rate used for this purpose is the OECD-developed rate pertaining to GDP for each individual year. Thus, direct public expenditures per student are expressed in current U.S. dollars.

3. Based on the U.S. consumer price index for urban areas (CPI-U), a series of price-inflators is derived by dividing 1995 CPI-U by each year's CPI-U.

4. By multiplying each prior year's expenditures per student in current U.S. dollars by the price-inflators developed in step 3, public direct expenditures per student in current U.S. dollars are converted into 1995 constant U.S. dollars.

Table S-1 lists the yearly PPP exchange rates that were applied in these conversions. In addition, the price inflators (based on the Consumer Price Index for all urban consumers) that were used to convert current dollars to 1995 dollars are the same as the ones used for Table 3-1 (see supplemental notes to Table 3-1 above).

There was a revision to the OECD questionnaire on finance data implemented in 1992. Before 1992, public direct expenditures for educational institutions also included transfers and payments to private entities. These transfers and payments to private entities include financial aid to students/households (in the form of loans, scholarships, and grants—this represents the bulk of "transfers and payments to private entities") as well as transfers and payments to private entities other than students/households. Starting in 1992, transfers and payments to private entities were excluded from public direct expenditures. As a result of this revision, pre- and post-1992 finance figures may not be strictly comparable. The data presented in Table S-2 illustrates the modest impact this revision might have had on the trends reported in Indicator 9. Because of incomplete reporting, it is likely that many countries did not report these funds in earlier years.

Notes for Tables 10-1 to 10-2:

The minimum and maximum teacher salaries were obtained from three separate editions of *Education at a Glance*, the 1995, 1996, and 1997 editions. In these publications, teacher salaries are reported in current U.S. dollars. To convert these salaries to constant 1995 U.S. dollars, we applied the price inflators developed from the Consumer Price Index for all urban consumers and reported in the supplemental notes to Table 3-1, above.

Notes for Tables 12-1 to 12-4:

Student/teacher ratio is calculated by dividing the number of FTE students by the number of FTE teachers. ("FTE" stands for "full-time equivalent." See glossary for definition).

Notes for Table 13:

In a few countries, the completion rate of upper secondary education for men and women is higher than 100 because the numerator (the number of students graduating) and the denominator (the population cohort) are derived from different sources. Usually, the denominator is based upon demographic projections while the numerator is based on actual head counts.

Table S-1.—Exchange rate between each country's currency and the U.S. dollar in terms of "Purchasing power parity" (units of the national currency per PPP dollar): 1985–1995

Country	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Australia	1.1	1.2	1.2	1.3	1.3	1.4	1.4	1.4	1.4	1.3	1.4
Austria	14.6	14.9	14.8	14.4	14.2	14.0	14.2	13.8	13.9	13.9	14.1
Belgium	40.5	41.0	40.7	39.9	40.0	39.5	39.2	37.4	37.3	37.4	37.5
Canada	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.2	1.3
Czech Republic	—	—	—	—	—	—	—	—	—	11.3	—
Denmark	9.3	9.5	9.6	9.6	9.5	9.4	9.2	9.1	8.8	8.7	8.7
Finland	5.7	5.7	5.9	6.0	6.2	6.3	6.1	6.3	6.1	6.2	6.2
France	6.6	6.8	6.8	6.7	6.7	6.6	6.5	6.4	6.6	6.6	6.7
Germany	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
Greece	79.7	91.4	101.3	112.7	121.7	140.8	161.1	168.0	184.0	197.0	212.0
Hungary	—	—	—	—	—	—	—	—	—	67.5	—
Iceland	38.9	47.3	54.9	65.1	75.2	82.6	85.4	82.7	82.9	84.2	84.7
Ireland	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.7	0.6	0.6
Italy	1,217.9	1,281.9	1,317.9	1,353.3	1,376.7	1,421.0	1,463.8	1,444.0	1,534.0	1,536.0	1,588.0
Japan	216.2	214.3	210.8	203.3	196.1	191.8	188.8	186.0	181.0	181.0	176.0
Korea	—	—	—	—	—	—	—	—	—	661.5	—
Luxembourg	40.6	41.1	39.5	39.5	40.2	39.7	39.5	38.5	39.6	40.1	40.3
Mexico	—	—	—	—	—	—	—	—	—	2.1	—
Netherlands	2.5	2.4	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.1
New Zealand	1.1	1.2	1.4	1.5	1.6	1.6	1.6	1.5	1.5	1.5	1.5
Norway	9.5	9.1	9.5	9.6	9.7	9.7	9.6	9.0	8.9	9.1	9.3
Poland	—	—	—	—	—	—	—	—	—	1.1	—
Portugal	64.1	75.3	81.2	87.3	94.5	103.7	110.0	114.0	117.0	118.0	122.0
Russia*	—	—	—	—	—	—	—	—	—	912.1	—
Spain	91.5	99.2	101.8	103.6	106.2	109.5	110.5	114.0	117.0	122.0	125.0
Sweden	7.7	8.0	8.2	8.4	8.6	8.9	9.5	9.7	9.8	9.9	10.1
Switzerland	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1
Turkey	231.1	296.8	397.8	637.6	1,003.0	1,491.0	2,240.2	3,751.0	5,990.0	—	—
United Kingdom	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
United States	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

— No data were reported or data were incomplete or inconsistent.
*Not an OECD member country.
NOTE: Countries in bold are G-7 countries.
SOURCE: Organization for Economic Co-operation and Development (OECD), *OECD in Figures 1987-1997*.

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Table S-2.—Components of total public direct expenditures in local currency (in millions): 1994

Country	Public direct expenditures	Transfers and payments to private entities	All transactions combined	Percent of total direct expenditures that are transfers
Australia	20,227	3,072	23,299	13.2
Austria	—	—	—	—
Belgium	424,394	15,215	439,608	3.5
Canada	44,365	5,375	49,740	10.8
Czech Republic	59,615	4,431	64,047	6.9
Denmark	60,447	13,762	74,209	18.5
Finland	33,731	3,309	37,040	8.9
France	416,416	19,034	435,450	4.4
Germany	148,449	6,817	155,266	4.4
Greece	736,717	2,470	739,187	0.3
Hungary	247,642	7,212	254,854	2.8
Iceland	19,555	1,698	21,253	8.0
Ireland	1,831	150	1,981	7.6
Italy	75,972,201	2,678,412	78,650,613	3.4
Japan	18,007,151	0	18,007,151	0.0
Korea	11,073,269	169,753	11,243,022	1.5
Mexico	64,344	626	64,970	1.0
Netherlands	27,437	4,740	32,178	14.7
New Zealand	4,655	714	5,369	13.3
Norway	59,499	10,759	70,258	15.3
Portugal	751,115	22,054	773,169	2.9
Spain	3,118,650	74,111	3,192,761	2.3
Sweden	100,365	16,866	117,231	14.4
Switzerland	19,585	649	20,233	3.2
Turkey	128,202,674	4,284,395	132,487,069	3.2
United Kingdom	30,348	3,982	34,331	11.6
United States	321,060	2,433	323,494	0.8

— No data were reported or data were incomplete or inconsistent.

NOTE: Countries in bold are G-7 countries.

SOURCE: Organization for Economic Co-operation and Development (OECD), Education Database, 1998.

Table S-3.—Legal school-leaving age for compulsory education and typical graduation age for upper secondary and first university degrees: 1991

Country	Legal school-leaving age for compulsory education	Typical graduation age	
		Upper secondary	First university
Australia	15	17	21
Austria	15	18	23
Belgium	18	17	22
Canada	16	17	22
Czech Republic	—	17	22
Denmark	16	19	22
Finland	16	18	23
France	16	17	21
Germany	18	18	25
Greece	15	18	22
Hungary	—	18	23
Iceland	—	20	23
Ireland	15	17	21
Italy	14	18	22
Japan	15	18	22
Korea	—	18	22
Luxembourg	15	18	23
Mexico	—	18	23
Netherlands	16	18	22
New Zealand	16	17	21
Norway	16	18	22
Poland	—	19	22
Portugal	14	17	22
Russia*	—	18	20
Spain	16	17	22
Sweden	16	18	23
Switzerland	15	19	26
Turkey	15	17	23
United Kingdom	16	17	21
United States	17	17	22

— No data were reported or data were incomplete or inconsistent.

*Not an OECD member country.

NOTE: Countries in bold are G-7 countries.

SOURCES: U.S. Department of Education, Office of Educational Research and Improvement, *Education in States and Nations*, 1996; Organization for Economic Co-operation and Development (OECD), *Education at a Glance, OECD Indicators*, 1997.

GLOSSARY

GLOSSARY

Consumer price index for all urban consumers (CPI-U): This price index measures the average change in the cost of a fixed basket of goods and services purchased by consumers living in urban areas.

Early childhood education: Education preceding the first level (primary). It also is called pre-primary education and includes kindergarten and pre-kindergarten in the United States. All types of establishments or group settings aimed at supporting and stimulating the child's social and intellectual development are included in early childhood education.

Educational attainment: The highest grade, year, or level of regular school attended and completed.

Educational expenditures: The sum of expenditures on instruction, research, public service, academic support, student services, institutional support, operation and maintenance of plant, and scholarship awards, from restricted and unrestricted funds (some of these expenditure categories do not apply to all levels of education). Expenditures per student consist of total educational expenditures divided by the number of students.

Enrollment rate: The enrollment rate is the percentage of the population in a typical school-age cohort who are enrolled in education. The typical age range for attendance in an education level may vary country by country.

Formal education: Formal education refers to education programs that are typically taking place in schools or other academic institutions with formal curriculums and educational requirements. Formal education usually leads to a publicly recognized academic credential, such as a graduation certificate, diploma, or degree.

Full-time-equivalent (FTE) enrollment: The sum of the enrollment of full-time students and the full-time equivalent of part-time students. Different conversion factors are sometimes used to convert enrollment of part-time students into full-time equivalents, depending upon education level. Conversion factors also may vary by country. For example, in some countries, two part-time students may be considered equal to one full-time student, while in other countries three part-time students may be considered equivalent to one full-time student.

Full-time-equivalent (FTE) teaching staff: The sum of the number of full-time teachers and the full-time equivalent of part-time teachers. Different conversion factors are sometimes used to convert part-time teachers into full-time equivalents.

Graduate degree: Any formal degree attained after the bachelor's degree. Graduate degrees include master's degrees, doctoral degrees, and professional degrees.

Gross domestic product (GDP): The gross domestic product (GDP) is equal to the total of all gross expenditures on the final use of domestically supplied goods and services, valued at the price to the

purchaser minus the imports of all goods and services. GDP per capita is the GDP of a country divided by its total population.

Higher education: Study beyond secondary school at an institution that offers programs leading to an associate, baccalaureate, or higher degree (or equivalent degrees in other countries). It also is called tertiary or postsecondary education.

Labor force: Persons age 15- to 64-years-old either employed or actively seeking work.

Legal school-leaving age: The last year of legally mandated education. This age varies by country as indicated by Table S-2.

Lower secondary education: Education approximately equivalent to grades 7, 8, and 9 in the United States.

Organization for Economic Co-operation and Development (OECD): An organization of 29 nations whose purpose is to promote trade and economic growth in both member and non-member nations. OECD's research activities cover almost all aspects of economic and social policy. The member countries are: Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States.

Primary education: Education prior to secondary education, equivalent to elementary school education in the United States.

Private expenditures: Expenditures funded by private sources include funds spent mainly by households, private non-profit institutions, and firms and business. Typical private expenditures include expenditures on school fees, materials such as textbooks and teaching equipment, transport to school (if organized by the school and paid by parents or other private sources), meals (if provided by the school and paid for through a private source), boarding fees, and expenditures by employers for initial vocational training.

Private schools or institutions: Schools or institutions organized and controlled independently of public authorities, even though they may receive public funding.

Public direct expenditures: Expenditures funded by public authorities at all levels, excluding indirect expenditures in the form of student loans or subsidies to families. Expenditures on education by public agencies other than education departments, ministries, or boards are included. Expenditures by education departments, ministries, or boards that are not directly related to education are not included.

Public schools or institutions: Schools or institutions organized and controlled by public authorities, normally providing open access to education without any distinction of race, sex, or religion.

Purchasing Power Parities (PPP): The rates of currency conversion that equalize the purchasing power of different currencies. This means that a given sum of money, when converted into different currencies at the PPP rates, will buy the same basket of goods and services in all countries.

Student/teacher ratio: The ratio of the full-time-equivalent enrollment in a given level of education to the total full-time-equivalent teachers working at the same education level.

Teachers: A teacher is defined as a person whose professional activities involve the transmitting of knowledge, attitudes, and skills that are stipulated in a formal curriculum program to students enrolled in a formal educational institution. The definition does not depend upon the qualifications held by the teacher, as it is based upon three concepts: activity (thus excluding former teachers who no longer have active teaching duties); profession (thus excluding people who work occasionally or in a voluntary capacity in schools); and formal program or curriculum (thus excluding people who provide services other than formal instruction, e.g., supervisors, activity organizers, etc., whether the program is established at the country, district, or school level).

Tertiary education: See "Higher education."

Unemployment rate: The percentage of the labor force without work, but actively seeking work.

Upper secondary education: Education approximately equivalent to grades 10, 11, and 12 in the United States. Upper secondary education may include general, technical, or vocational education.

Youth unemployment rate: The percentage of the labor force under age 25 without work, but actively seeking work.

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